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The Architects' JOURNAL for November 13, 1958

THE ARCHITECTS' JOURNAL

andard contents

very issue does not necessarily contain all these contents, but they are the regular features which continually recur

EWS and COMMENT
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ECHNICAL SECTION
formation Sheets
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URRENT BUILDING
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HE ARCHITECTURAL PRESS

11 and 13, Queen Anne's Gate, Westminster, W.1. 'Phone: Whitehall 0611

Price 1s. 0d.

Registered as a Newspaper.

★ A glossary of abbreviations of Government Departments and Societies and Committees of all kinds, together with their full address and telephone numbers. The glossary is published in two parts—A to Ii one week, Il to Z the next. In all cases where the town is not mentioned the word LONDON is implicit in the address.

AA	Architectural Association, 34/6, Bedford Square, W.C.1.	Museum 0974
AAI	Association of Art Institutions. Secy.: W. L. Stevenson, College of Art, Hope Street, Liverpool 1.	Royal 1826
ABS	Architects' Benevolent Society. 66, Portland Place, W.1.	Langham 5533
ABT	Association of Building Technicians. 1, Ashley Place, S.W.1.	Victoria 0447-8
ACGB	Arts Council of Great Britain. 4, St. James's Square, S.W.1.	Whitehall 9737
ADA	Aluminium Development Association. 33, Grosvenor Street, W.1.	Mayfair 7501/8
ARCUK	Architects' Registration Council. 68, Portland Place, W.1.	Langham 5861
BAE	Board of Architectural Education. 66, Portland Place, W.1.	Langham 5721
BC	Building Centre. 26, Store Street, Tottenham Court Road, W.C.1.	Museum 5400
BCC	British Colour Council. 13, Portman Square, W.1.	Welbeck 4185
BCCF	British Cast Concrete Federation. 105, Uxbridge Road, Ealing, W.5.	Ealing 9621
BCIRA	British Cast Iron Research Association. Alvechurch, Birmingham.	Redditch 716
BDA	British Door Association. 10, The Boltons, S.W.10.	Fremantle 8494
BEDA	British Electrical Development Association. 2, Savoy Hill, W.C.2.	Temple Bar 9434
BIA	British Ironfounders' Association. 145, Vincent Street, Glasgow, C.2.	Glasgow Central 2891
BID	Building Industries Distributors. 52, High Holborn, W.C.1.	Chancery 7772
BINC	Building Industries National Council. 11, Weymouth Street, W.1.	Langham 2785
BOT	Board of Trade. Whitehall Gardens, Horseguards Avenue, Whitehall, S.W.1.	Trafalgar 8855
BRS	Building Research Station. Bucknalls Lane, Watford.	Garston 4040
BSA	Building Societies Association. 14, Park Street, W.1.	Mayfair 0515
BSI	British Standards Institution. British Standards House, 2, Park St., W.1.	Mayfair 9000
BTE	Building Trades Exhibition. 32, Millbank, S.W.1.	Tate Gallery 8134
CABAS	City and Borough Architects Society. C/o S. A. G. Cook, A.R.I.B.A., Borough Architect and Director of Housing, Town Hall, High Holborn, W.C.1.	Holborn 3411
CAS	County Architects' Society. C/o S. Vincent Goodman, F.R.I.B.A., Shire Hall, Bedford.	Bedford 67444
CCA	Cement and Concrete Association. 52, Grosvenor Gardens, S.W.1.	Belgravia 6661
CDA	Copper Development Association. 55, South Audley Street, W.1.	Grosvenor 8811
COID	Council of Industrial Design. 28, Haymarket, S.W.1.	Trafalgar 8000
CPRE	Council for the Preservation of Rural England. 4, Hobart Place, S.W.1.	Sloane 4280
CUC	Coal Utilization Council. 3, Upper Belgrave Street, S.W.1.	Sloane 9116
CVE	Council for Visual Education. 13, Suffolk Street, Haymarket, S.W.1.	Reading 72255
DIA	Design and Industries Association. 13, Suffolk Street, S.W.1.	Whitehall 0540
EJMA	English Joinery Manufacturers' Association (Incorporated). Sackville House, 40, Piccadilly, W.1.	Regent 4448
EPNS	English Place-Name Society. 7, Selwyn Gardens, Cambridge.	
FAS	Faculty of Architects and Surveyors. 68, Gloucester Place, W.1.	Welbeck 9966
FASS	Federation of Associations of Specialists and Sub-Contractors, 14, Bryanston Street, W.1.	Welbeck 1781
FBBDO	Fibre Building Board Development Organization Ltd. (Fidor), Stafford House, Norfolk Street, W.C.2.	Covent Garden 3008
FBI	Federation of British Industries. 21, Tothill Street, S.W.1.	Whitehall 6711
FC	Forestry Commission. 25, Savile Row, W.1.	Regent 0221
FCMI	Federation of Coated Macadam Industries. 37, Chester Square, S.W.1.	Sloane 1002
FDMA	The Flush Door Manufacturers Association Ltd. Trowell, Nottingham.	Ilkeston 623
FLD	Friends of the Lake District. Pennington House, nr. Ulverston, Lancs.	Ulverston 201
FMB	Federation of Master Builders. 33, John Street, W.C.1. Tel.: Chancery 7583 (6 lines)	
FPC	The Federation of Painting Contractors, St. Stephen's House, S.W.1.	Whitehall 3902
FRHB	Federation of Registered House Builders. 82, New Cavendish Street, W.1.	Langham 4341
GPDA	Gypsum Plasterboard Development Association. 11, Ironmonger Lane, E.C.2.	Monarch 8888
GC	Gas Council. 1, Grosvenor Place, S.W.1.	Sloane 4554
GG	Georgian Group. 2, Chester Street, S.W.1.	Belgravia 3081
HC	Housing Centre. 13, Suffolk Street, Pall Mall, S.W.1.	Whitehall 2881
IAAS	Incorporated Association of Architects and Surveyors. 29, Belgrave Square, S.W.1.	Belgravia 3755
ICA	Institute of Contemporary Arts. 17-18, Dover Street, Piccadilly, W.1.	Grosvenor 6186
ICE	Institution of Civil Engineers. 1, Great George Street, S.W.1.	Whitehall 4577
IEE	Institution of Electrical Engineers. Savoy Place, Victoria Embankment, W.C.2.	Temple Bar 7676
IES	Illuminating Engineering Society. 32, Victoria Street, S.W.1.	Abbey 5215
IGE	Institution of Gas Engineers. 17, Grosvenor Crescent, S.W.1.	Sloane 8266
IHVE	Institution of Heating and Ventilating Engineers. 49, Cadogan Square.	Sloane 1601/3158
IIBDID	Incorporated Institute of British Decorators and Interior Designers. 100, Park Street, Grosvenor Square, W.1.	Mayfair 7086

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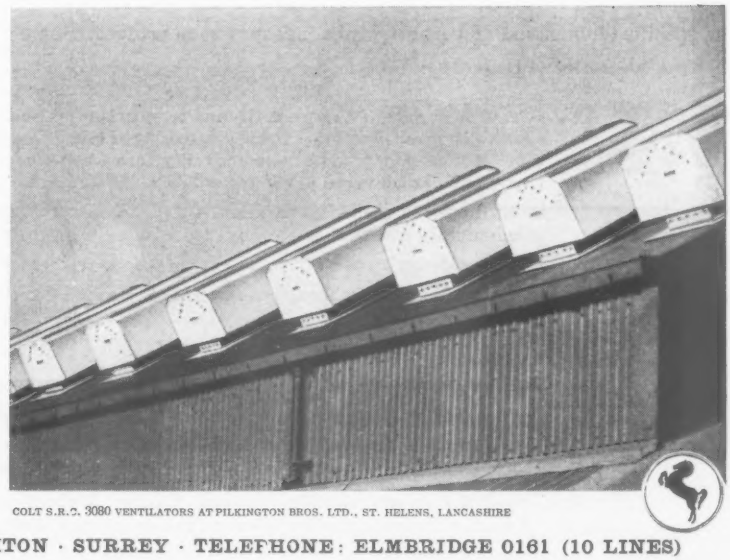

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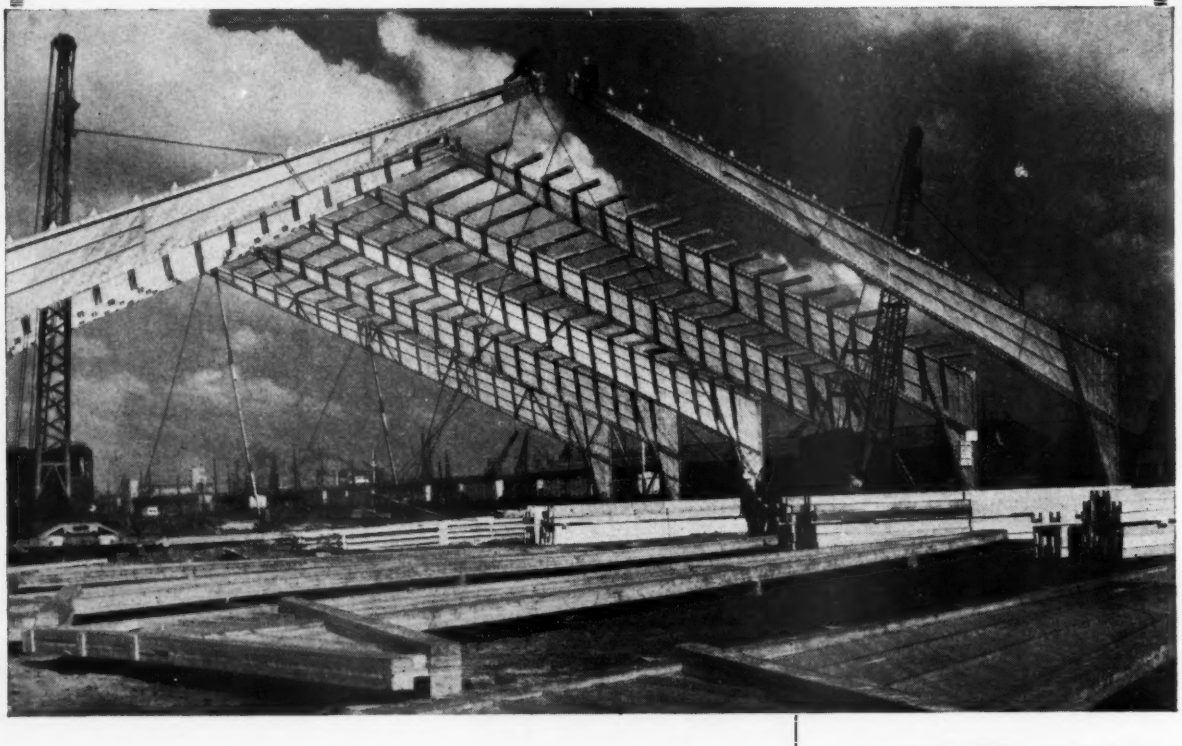

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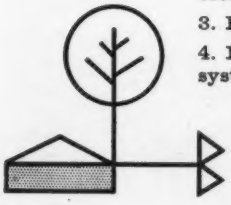

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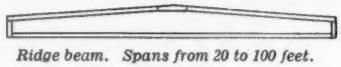

Ridge beam. Spans from 20 to 100 feet.

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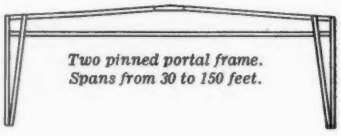
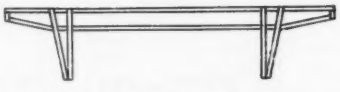


Two pinned portal frame. Spans from 30 to 150 feet.

Three pinned frame with vertical outer leg. Spans from 30 to 150 feet.



Two pinned portal frame with cantilevers. Spans from 15-40-15 to 30-80-30 feet.

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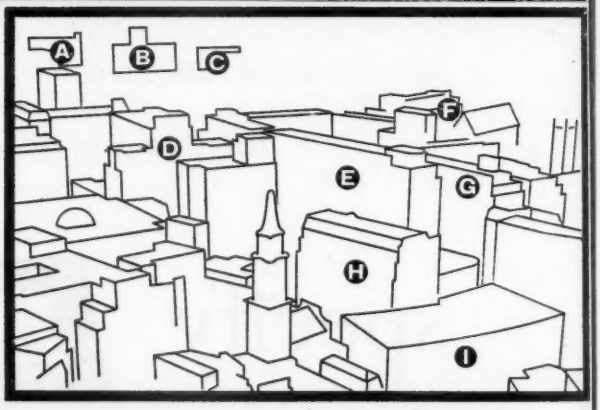

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C	Chile House	Joseph Mendelson & Partners, 71 Wimpole St., W.1.	Gee, Walker & Slater.
D	Garrard House	Major A. S. Ash, 66 Gt. Cumberland Place, W.1.	Sir Robert McAlpine.
E	2/12 Gresham St.	Easton & Robertson, 53 Bedford Sq., W.C.1.	John Laing & Son Ltd.
F	Guildhall Office Block	Sir Giles Gilbert Scott, 9 Grays Inn Sq., W.C.1.	Trollope & Colls Ltd.
G	Clements House	Trehearne & Norman Preston & Partners, 83 Kingsway, W.C.2.	Wates Ltd.
H	Saddlers Hall	L. Sylvester Sullivan, 14 Grays Inn Sq., W.C.1.	Holland & Hannan and Cubitts.
I	Cheapside House	Theo. H. Birks, 38 Portland Place, W.1.	Bernard Sunley & Sons.

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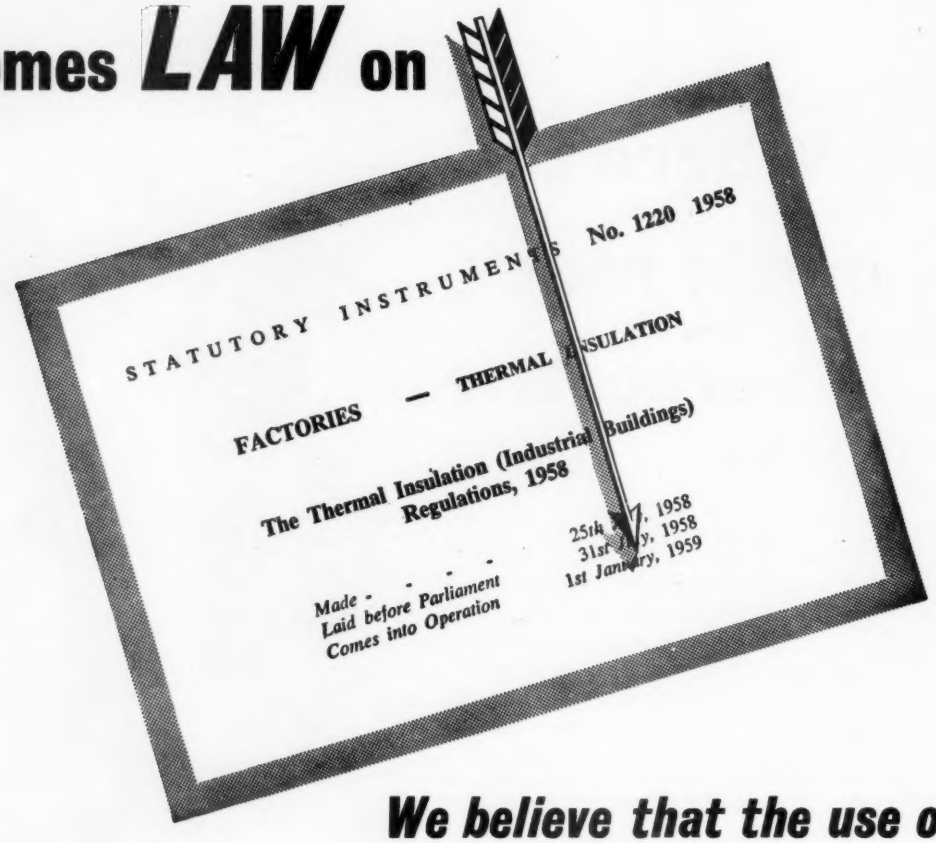
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AP130

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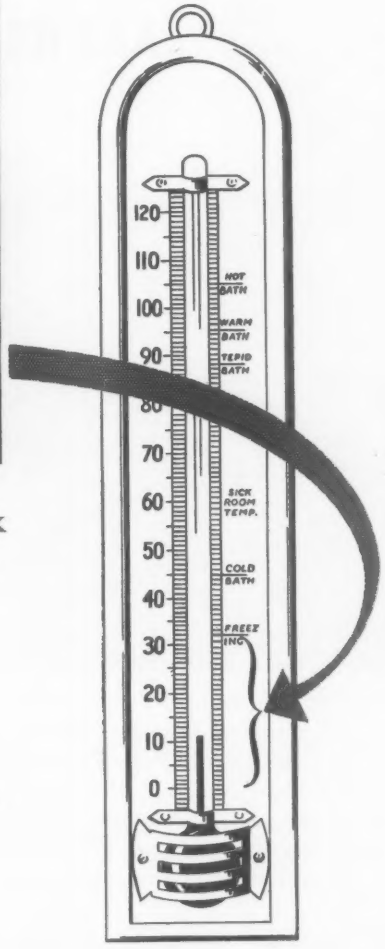

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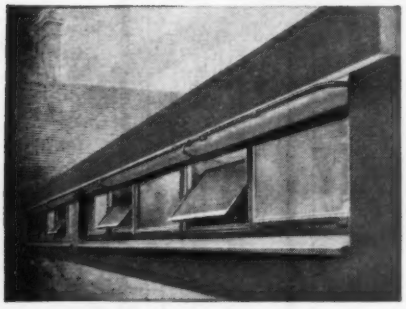

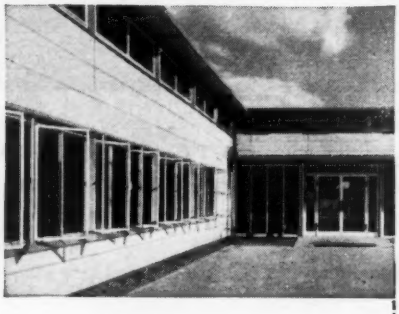

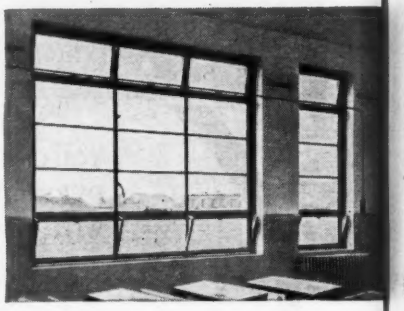

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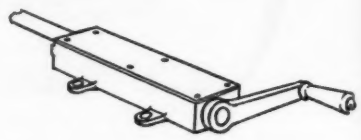

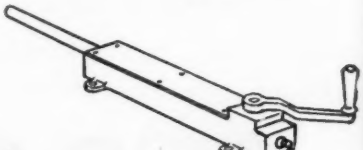

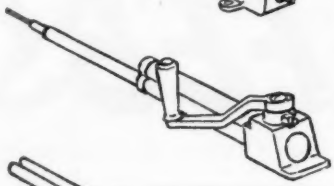

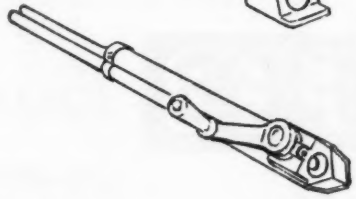

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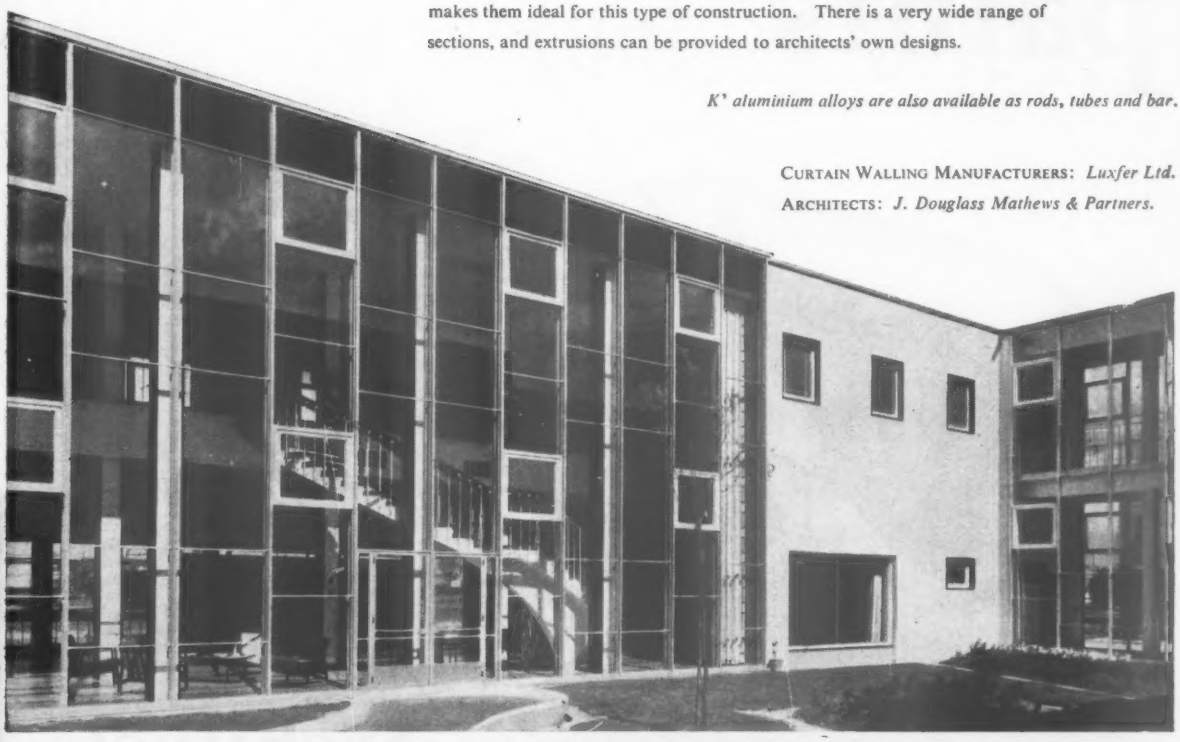

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FOR CURTAIN WALLING

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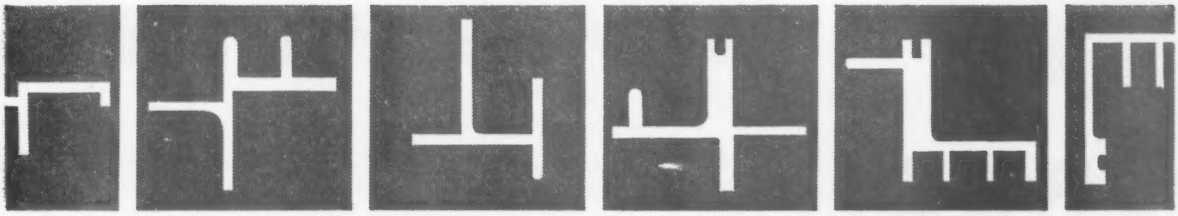

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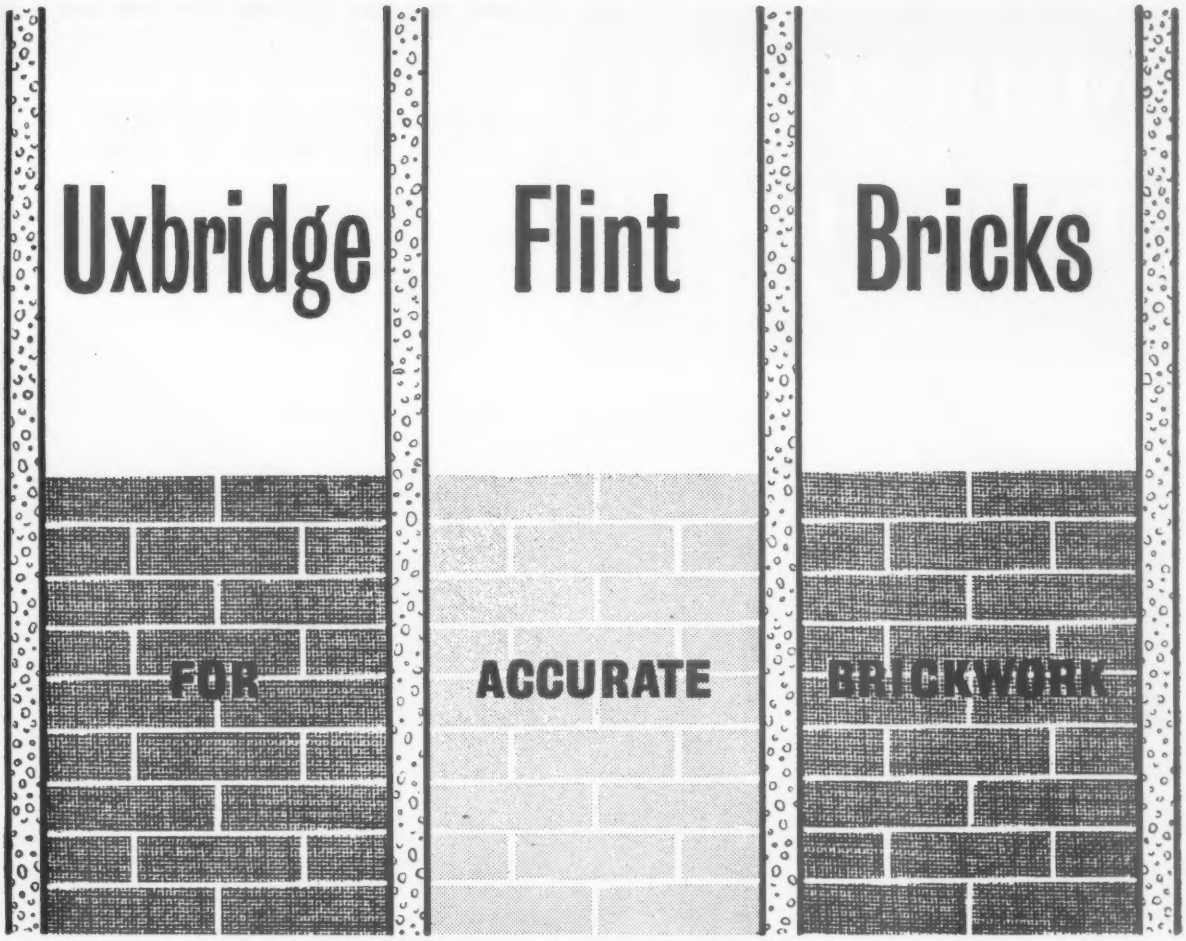

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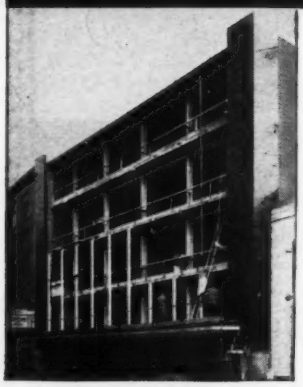
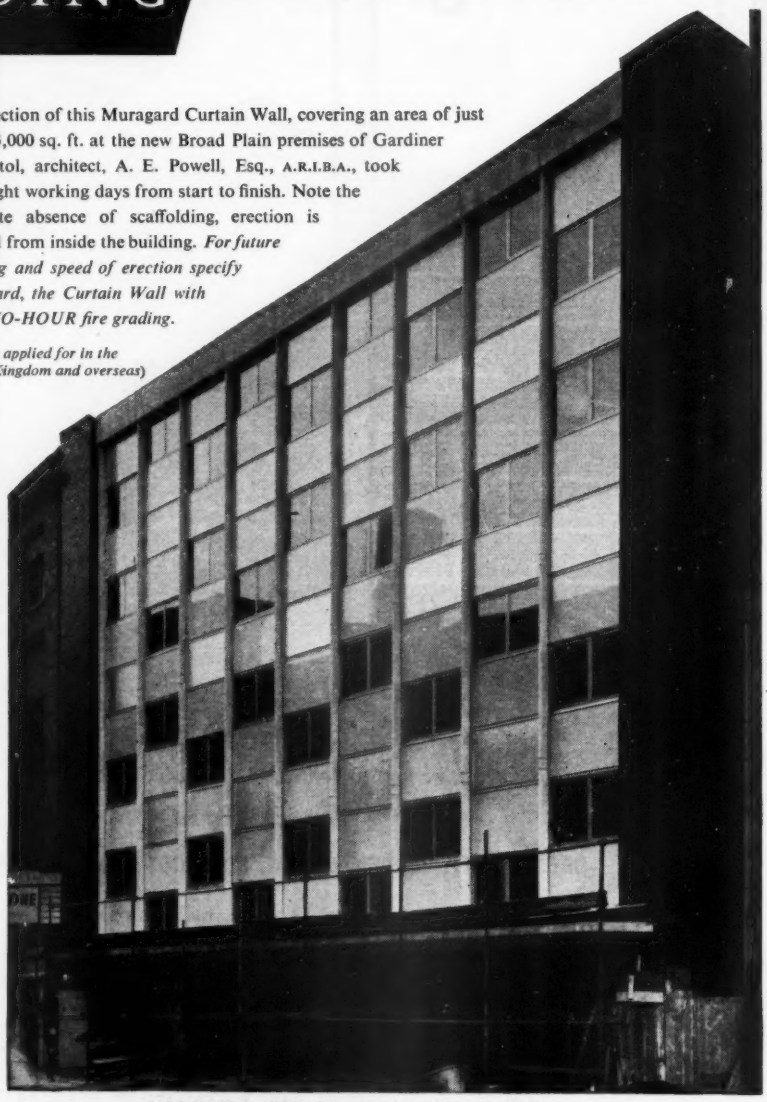


MARCH 18th, 1958
Erection commences.

The erection of this Muragard Curtain Wall, covering an area of just under 3,000 sq. ft. at the new Broad Plain premises of Gardiner of Bristol, architect, A. E. Powell, Esq., A.R.I.B.A., took only eight working days from start to finish. Note the complete absence of scaffolding, erection is effected from inside the building. *For future planning and speed of erection specify Muragard, the Curtain Wall with the TWO-HOUR fire grading.*

(Patents applied for in the United Kingdom and overseas)



MARCH 27th, 1958. The completed Curtain Wall.

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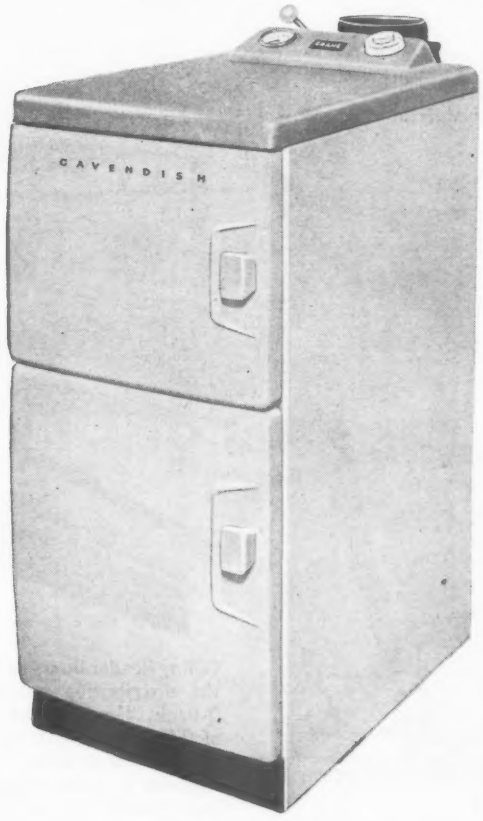

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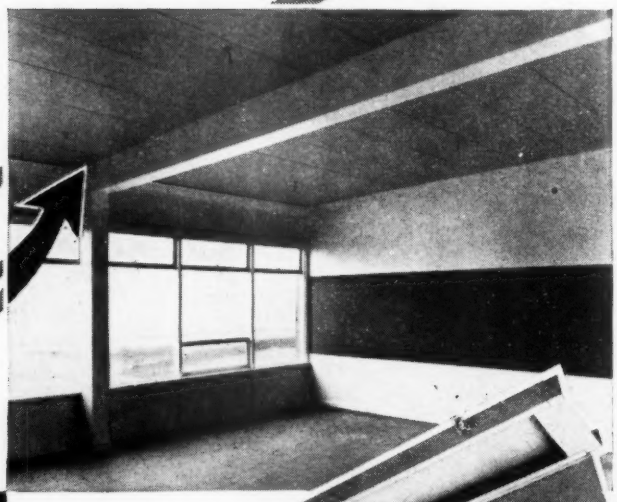

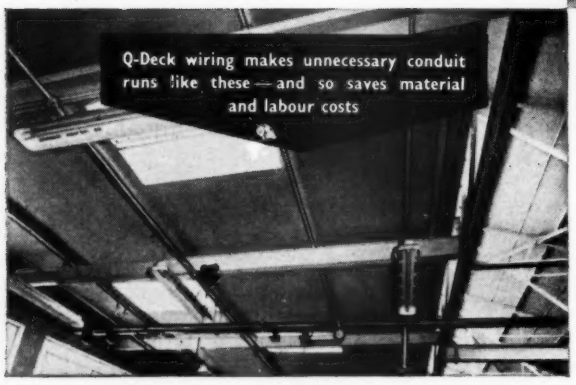

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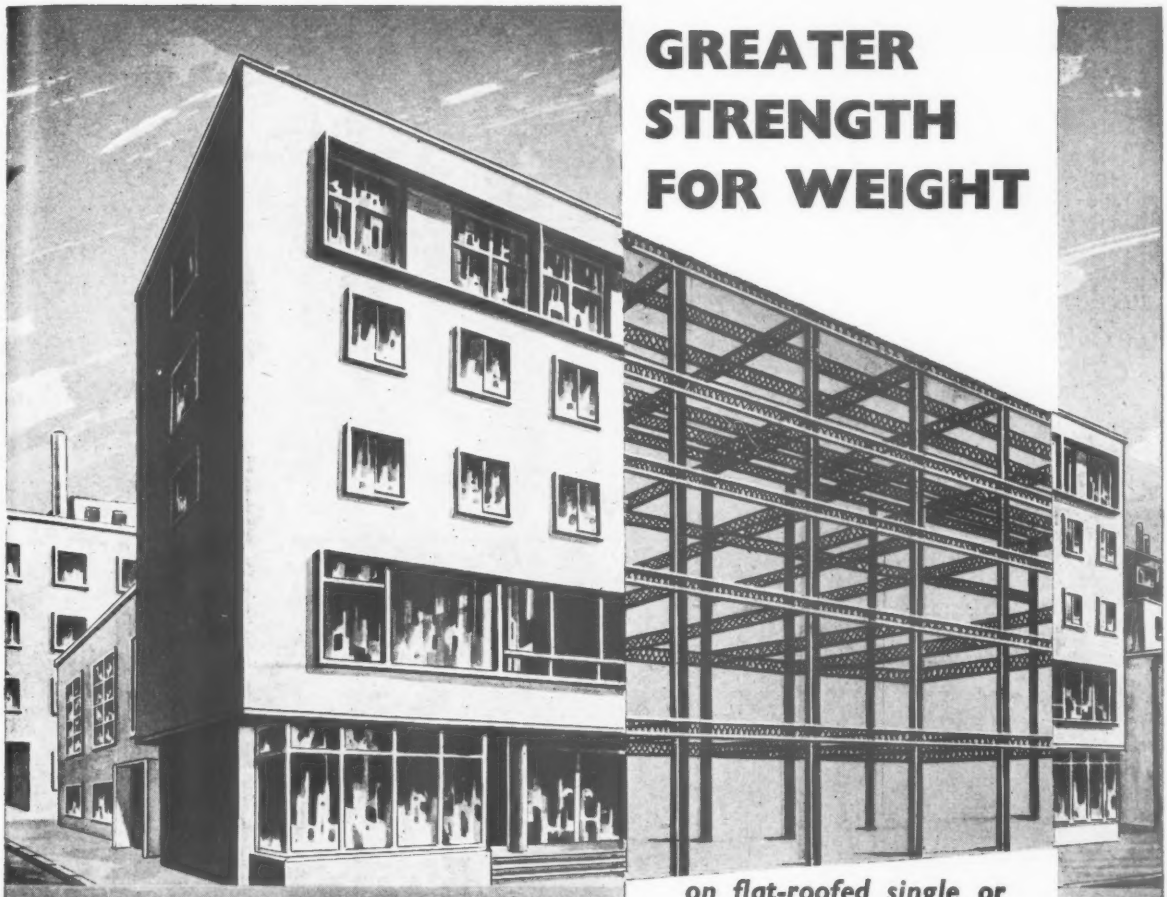

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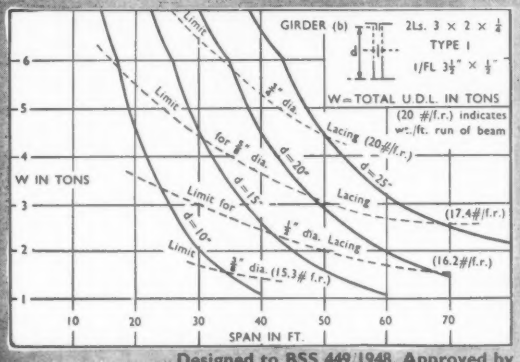

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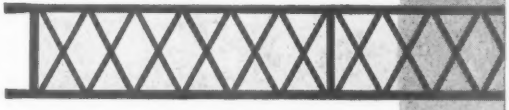

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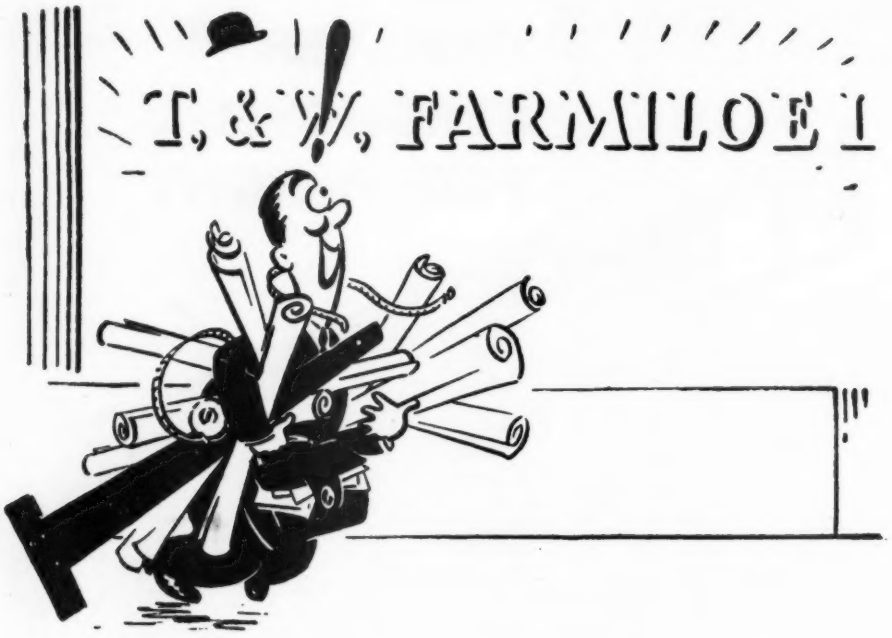

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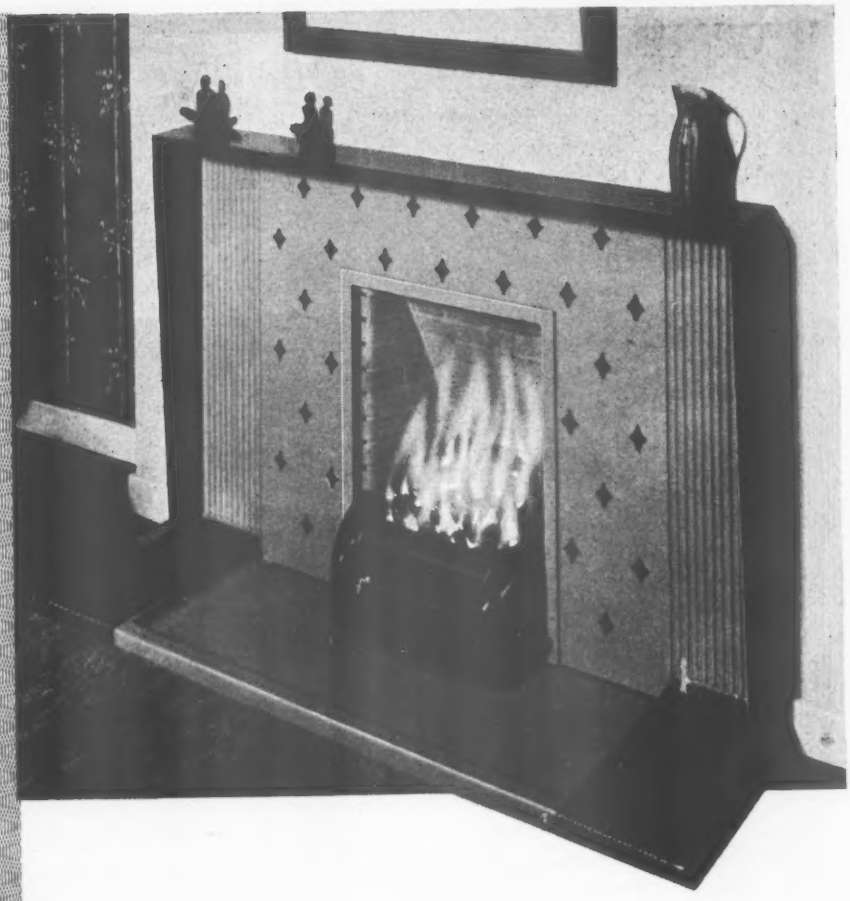
THE "STAR" SUITE



DIMENSIONS

Height from floor level to top of wood trim	31⅝"
Width outside wood trim	49½"
Mantel depth (at shelf)	4½"
Mantel depth (at kerb)	2½"
Mantel thickness	1"
Hearth projection	14½"
Hearth width	38⅜"
Width of fire opening	15"
Height of fire opening	21½"

Admirers of the sophistication of simplicity will approve of the lines of the latest product of Carron Foundries. The "Star" Suite contrasts superb enamelling of surround and hearth with the rich woodwork of the mantel. Slim reeds flank the centre panel, embossed with the stars of a medieval shield. The fire may be run continuously and used to provide a hot water supply. The price of the suite is surprisingly reasonable.

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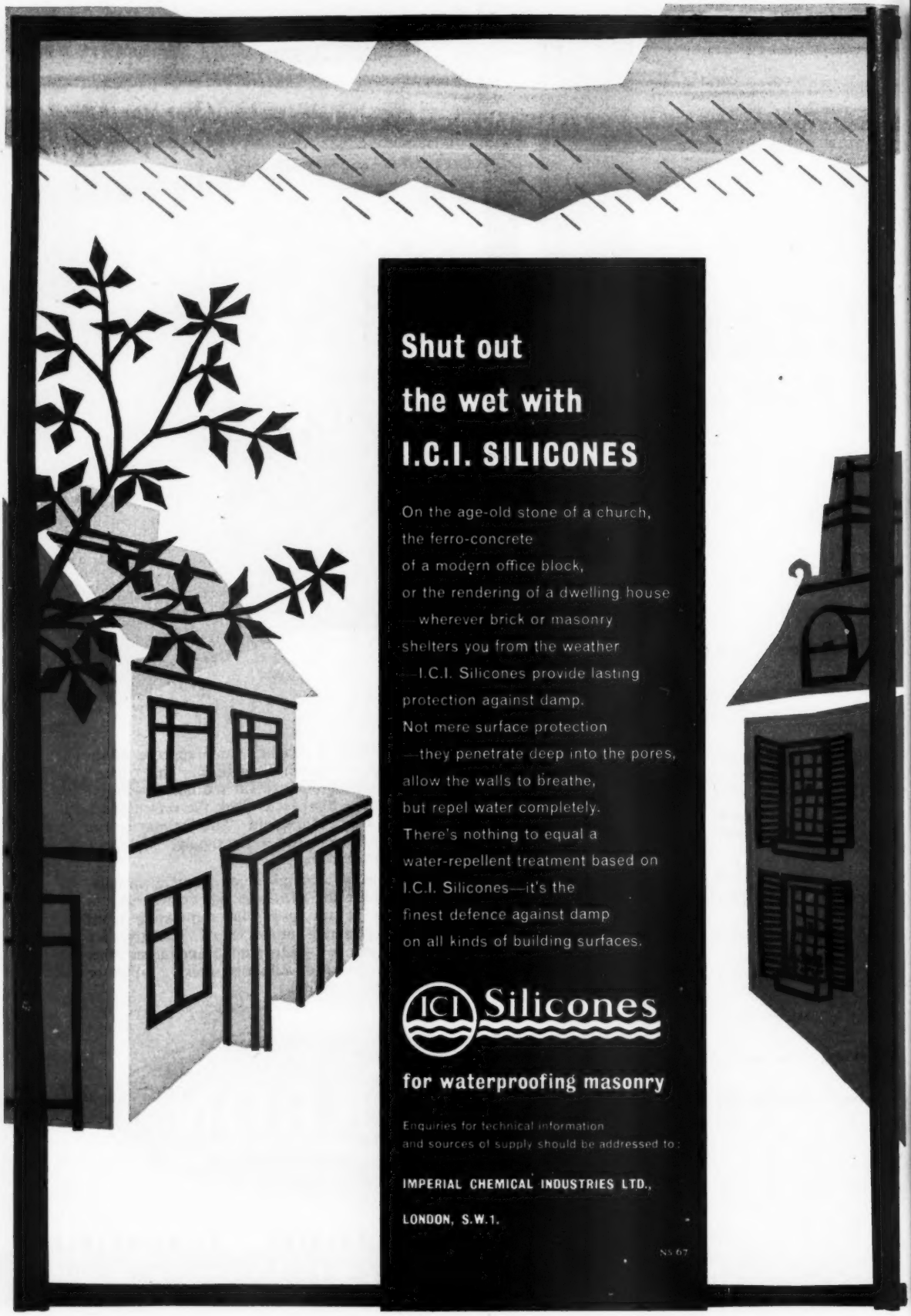

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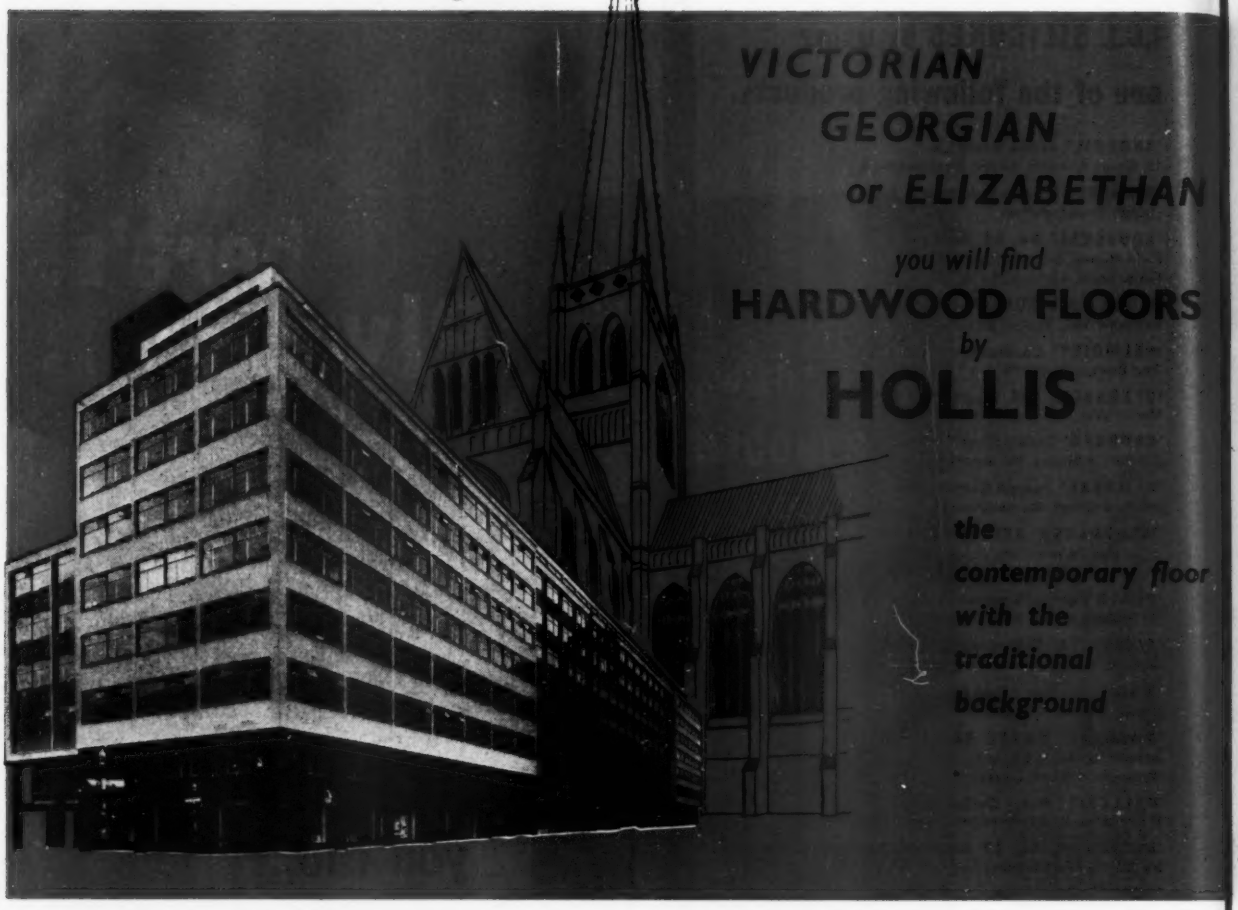

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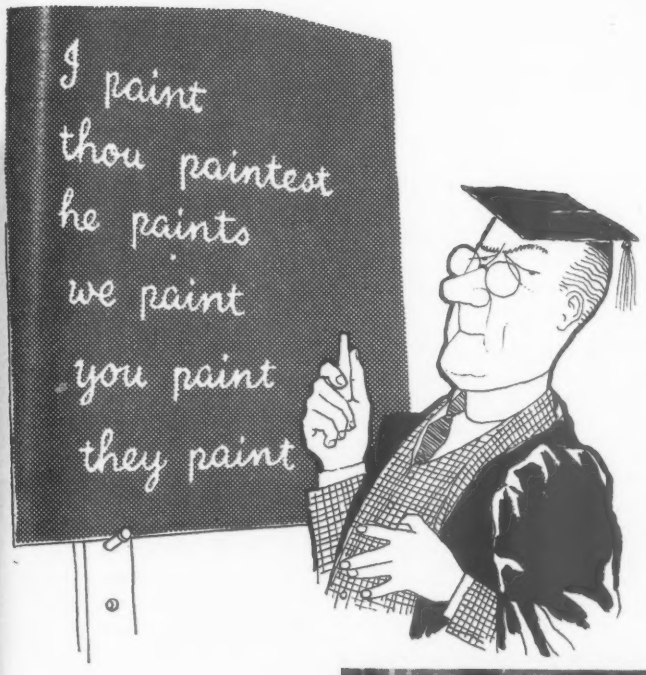

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monthly review by WILLIAMS & WILLIAMS

'WALLSPAN' FOR EASTBOURNE LUXURY FLATS

1 The new 7-story Park Gates flats overlooking the sea at Eastbourne is, as far as we can trace, the first block of luxury flats in this country to have glass curtain walling. Wallspan was specified by the architect who was largely influenced by the detailing and way in which 'Wallspan' is designed for precision construction. This choice was amply justified in a trouble free installation.

The infilling panels are sprayed with a special paint which gives a multi-colour effect from one spraying.

Williams & Williams Standard Metal Windows to BS.990 have been used extensively both in the 'Wallspan' grid and also in the brick facades.

Park Gates present a very elegant face on every side—no pipes are visible on the exterior of the building. Single stack plumbing is used and this is thought to be the first time that it has occurred in a seven-story building outside the L.C.C. area. The interior is equally carefully detailed—for instance television and telephone wiring is laid on to every flat and apparatus merely needs to be plugged in.

A novel feature is an annexe of ten bedrooms with private bathrooms which can be rented by tenants for their visitors' occupation.

BRITAIN'S TALLEST OFFICE BLOCK HAS ALUMINIUM WINDOWS BY WILLIAMS & WILLIAMS

2 Eastbourne Terrace, Paddington, has already been in the news for the fantastic speed at which construction has gone on. The 18-story tower block was 'topped out' almost exactly a year after work started on the site. Williams & Williams contribution to this notable achievement was the supply of 2698 double hung windows in aluminium. In the tower block from the 8th story upwards, the windows are double glazed for additional thermal insulation.

The steel windows used in the lift halls of the tower block etc. were also supplied by Williams & Williams while the links between the tower block and the wings are in 'Wallspan' infilled with clear glass.

The balustrading which runs round the cornices of the wings is also a product of the Williams & Williams group. The upstands are made of steel and the rails are aluminium.

'ALUMINEX' GLAZING GIVES IDEAL WORKING CONDITIONS AT NEW PERMUTIT FACTORY

3 The extensive use of 'Aluminex' Patent Glazing combined with the wide uncluttered floor space resulting from the use of portal frame construction gives exceptionally good working conditions on the floor of Permutit Company's new factory at Ealing. Great importance has been attached to this aspect of the new building and the whole project including the interior colour schemes was planned in detail by the architects and engineers. The factory floor area of approximately 36,000 sq. ft. is divided into three bays, two of which have electric travelling cranes running the full length. Canteen and toilet facilities including showers and lockers are grouped together as an extension of the adjoining office block where Williams & Williams provided the purpose made windows and lantern lights as well.

'WALLSPAN' CURTAIN WALLING AT LEEDS GRAMMAR SCHOOL

4 As can be seen from the photograph, interest is added to the long facade of the main classroom block by a 'picture window' treatment of the staircase wells using clear-glazed 'Wallspan'. The use of individual staircase access to the blocks of classrooms rather than corridors running through the building from end to end is an unusual feature. It comes about because the north/south facing block has to be built two classrooms 'thick'. The north facing rooms open on to terraces on the first floor and at the top of the building receive a measure of sun through roof glazing. 'Wallspan' is used also in the south-east elevation of the foyer linking the classroom and assembly hall blocks.

A WILLIAMS & WILLIAMS 'CO-OPERATIVE' CONTRACT

5 Everything in the new St. Helen's Co-operative Society store which Williams & Williams could supply—they supplied. 'Wallspan' Curtain Walling, purpose made aluminium windows, standard steel windows, 'Aluminex' Patent Glazing, 'Aluminex' Lantern Lights and pressed metal work. Quite an impressive list—and it had the added advantage that all these products could be integrated by the architect on one schedule so as to ensure a logical and easy-to-control sequence of delivery.

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1 PARK GATES FLATS, EASTBOURNE
Architect: H. Hubbard Ford, F.R.I.B.A.
Architect-in-Charge: S. Hoyer, M.A.A.
A *General view showing the 'Wallspan' installation.*
B *Detail showing the Williams & Williams Standard Metal Windows.*

2 EASTBOURNE TERRACE DEVELOPMENT, LONDON
Architects: Cecil H. Elsom & Partners.
Consulting Engineers: Clarke, Nicholls & Marcell.
Quantity Surveyors: Cyril Sweett & Partners.
Contractors: Tersons Limited.
Some of the 2698 Williams & Williams aluminium double-hung windows.

3 THE PERMUTIT CO. LTD., EALING
Architects and Consulting Engineers: Husband & Co.
'Aluminex' Patent Glazing in one of the portal framed bays.

4 TEMPLE MOOR GRAMMAR SCHOOL, LEEDS
Architects: F. R. S. Yorke, E. Rosenberg, C. S. Mardall, F./F.R.I.B.A.
North-western facade of the classroom block note the detailing of the staircase cladding.

5 C.W.S. STORE, ST. HELEN'S, LANCASHIRE.
Architect: G. S. Hay, A.R.I.B.A., *Chief Architect, C.W.S. Architect's Department, Manchester.*
Architect in design: J. Douglas, A.R.I.B.A
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1B

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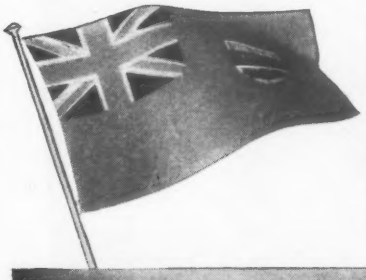
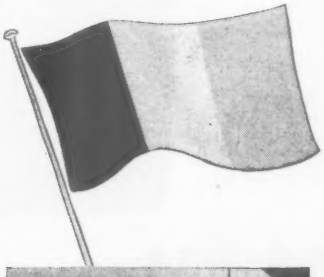


CANADA FREIGHT TERMINAL



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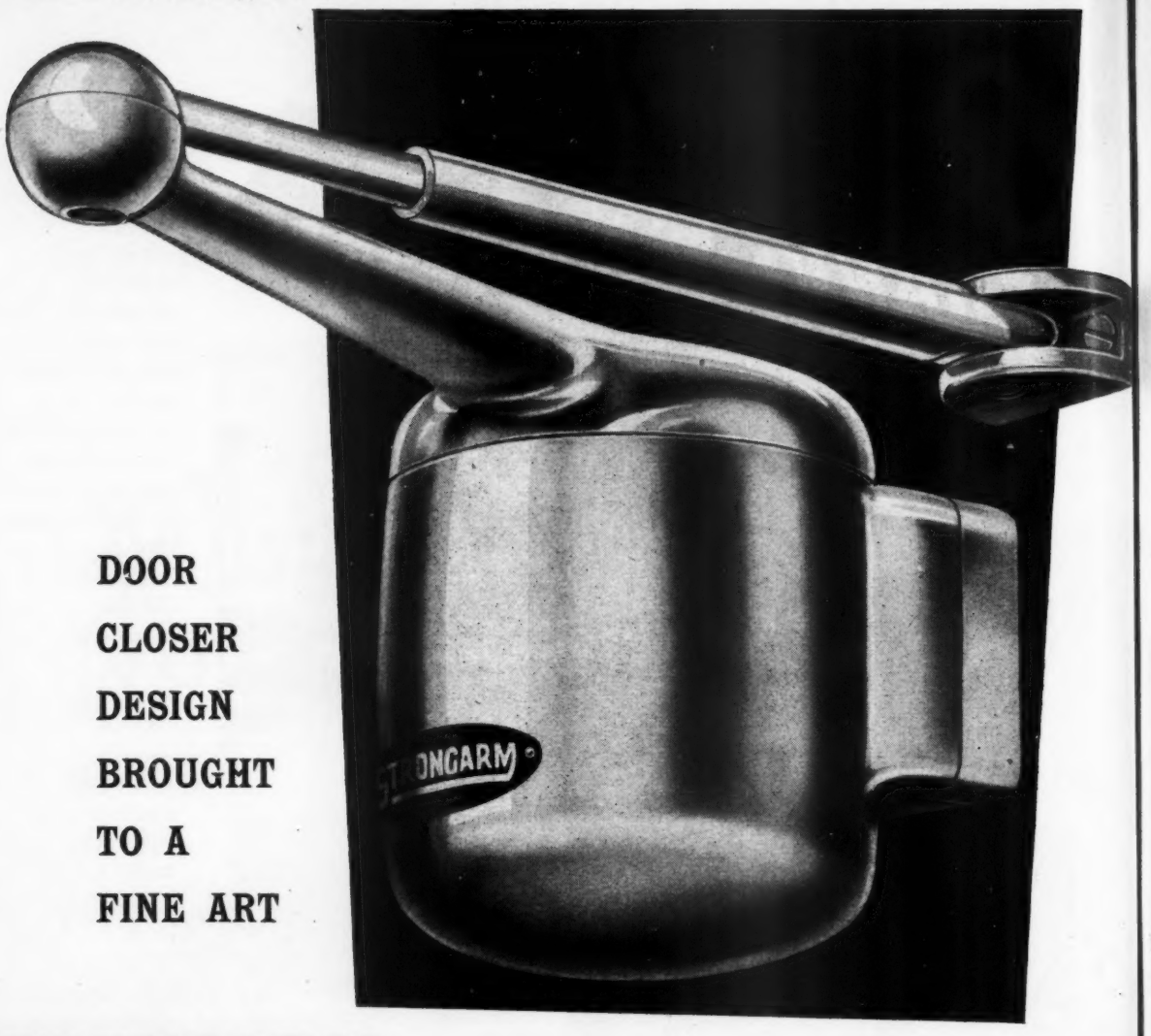

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TEXIDEC, a development of our standard Emulsion Coating, is extremely economical by comparison with other textured finishes of comparable durability. We will gladly send sample panels and full details on request . . .

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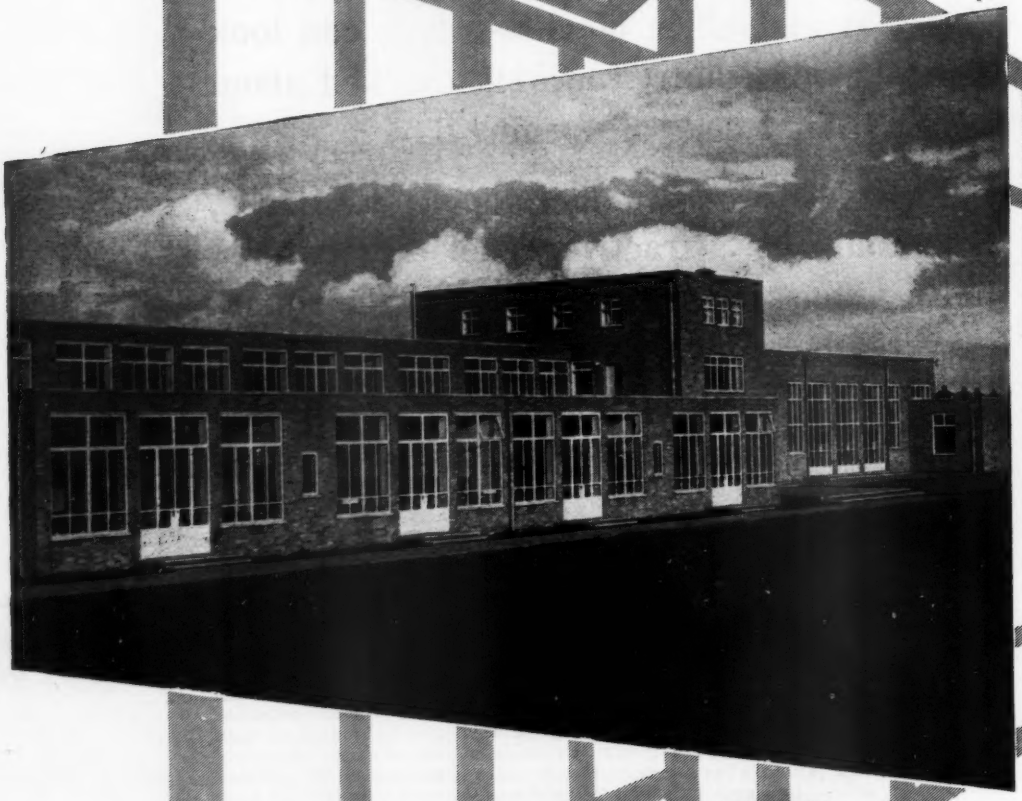

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TECHNICAL DATA SHEET No. 2

Minerva

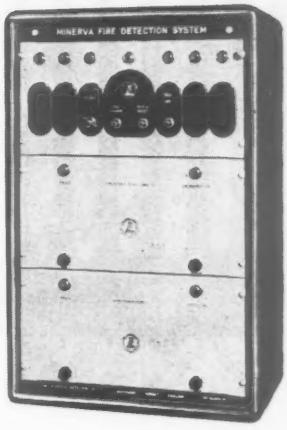
FIRE PREVENTION BY NUCLEAR DETECTION

Minerva Control Units and Signal Panels

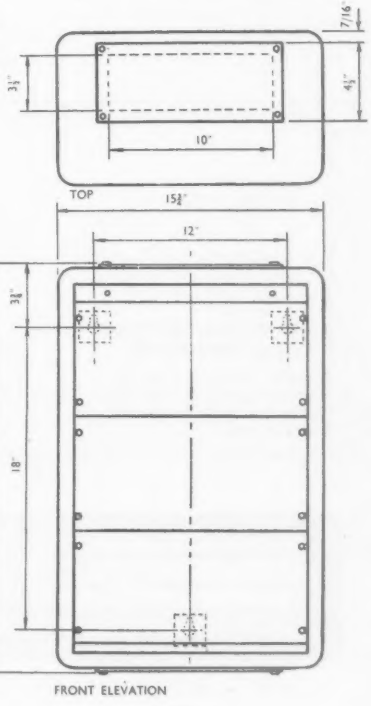
Minerva Control Units and Signal Panels have a dual function: (a) to provide stabilised voltage supplies for Minerva Detectors; (b) to act as receivers and indicators for the alarm signals, and as the central distribution points from which they may be transmitted to fire stations or watch offices, or used to call into action automatic fire-fighting equipment.

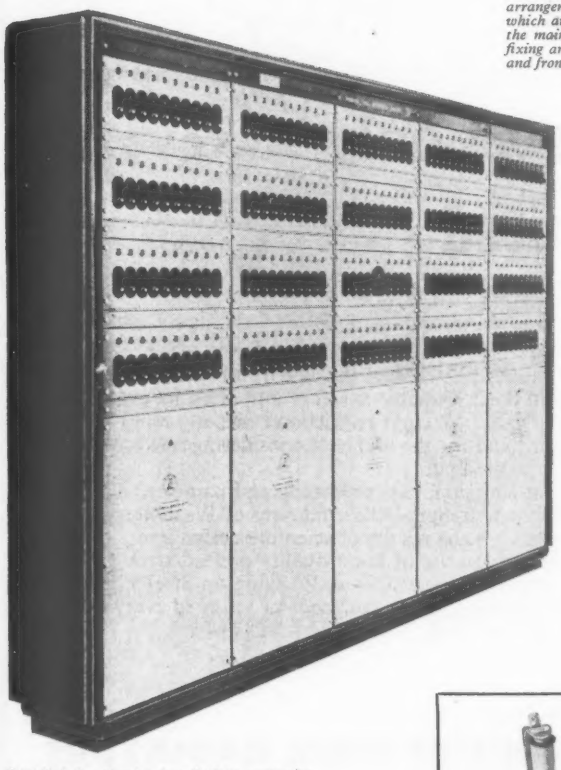
Minerva Control Units are housed in robust steel cases in either wall mounting or floor standing console form, finished in Mid-Brunswick Green B.S.S.226, with panels of Verdigris Green B.S.S.280.

They comprise assemblies of standard Minerva sub-units which employ the latest electronic manufacturing techniques. They are simple to install and service, and require connection only to groups of Minerva Detectors and to a standard A.C. mains supply. They are fitted with removable entry plates to which standard cable glands may be attached. Easy access to the sub-units for inspection and service is assured by the hinged panel construction. A stand-by battery supply comes into operation automatically in the event of mains failure. Facilities are provided for rapid routine checking, and, should faults develop, automatic fault signals indicate that attention is necessary.



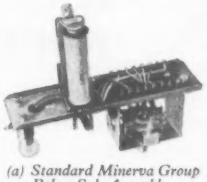
Illustrated (right) is a typical Minerva wall mounting Control Unit showing the arrangement of the signal panel below which are the emergency supply panel and the mains supply panel. Dimensions and fixing arrangements are shown in the plan and front elevation diagrams below.





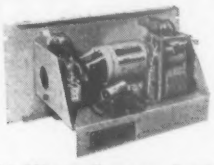
Supplied for Service installations protecting vital defence establishments, this typical 5-bay Minerva console Control Unit and Signal Panel operates 197 groups of Minerva Detectors.

Typical Minerva Sub-Units



(a) Standard Minerva Group Relay Sub-Assembly.

(b) Rear view of assembly of Minerva Group Relay Sub-Assemblies and Monitor Unit.



(c) Minerva Emergency Supply Unit.

TE CUSTOS URBIS

MINERVA

This is one of a series of technical data sheets describing the various features of the Minerva System of Fire Prevention by Nuclear Detection. The Minerva Detector Company Ltd. provides a complete Fire Prevention Service, undertaking surveys, design of installations for specialised risks, commissioning and routine inspection. A Minerva engineer will be pleased to call to advise on your fire prevention problems. Write to:

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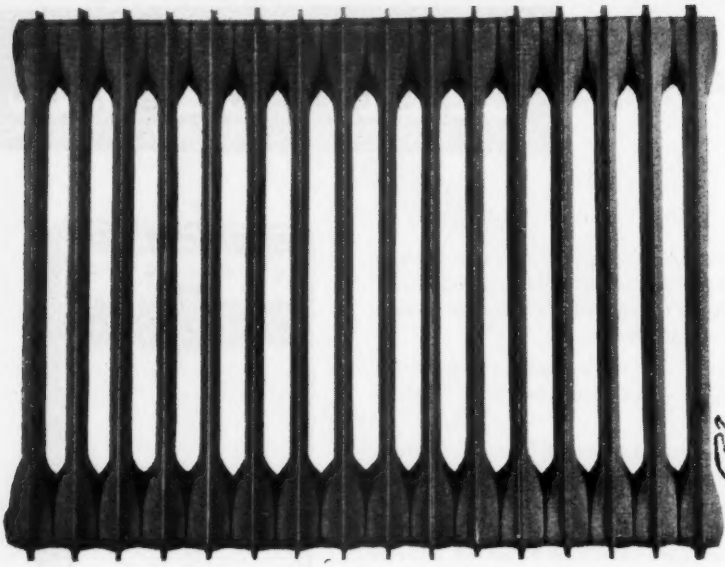

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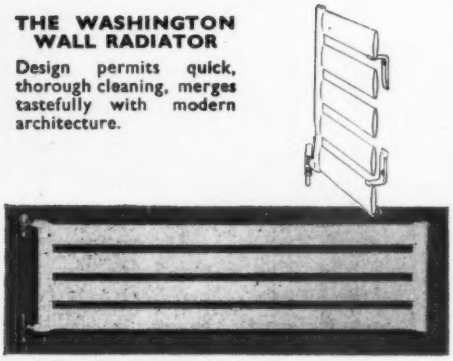

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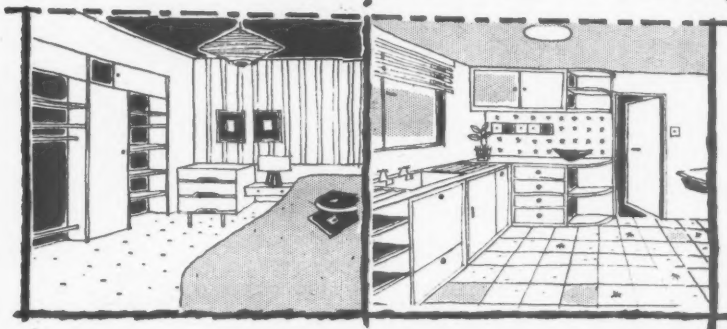

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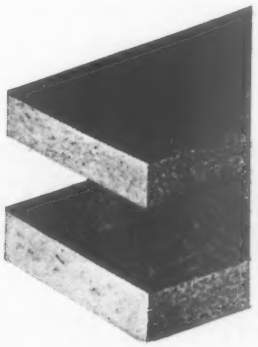

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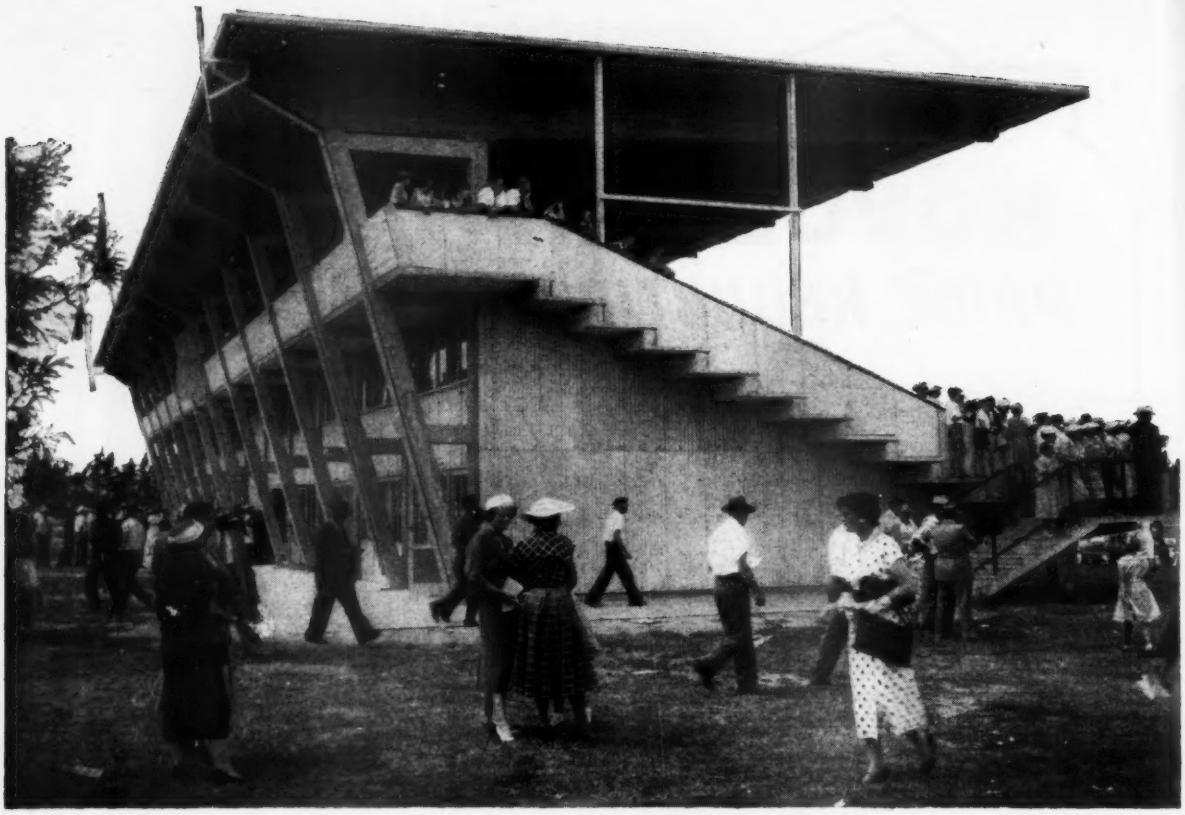
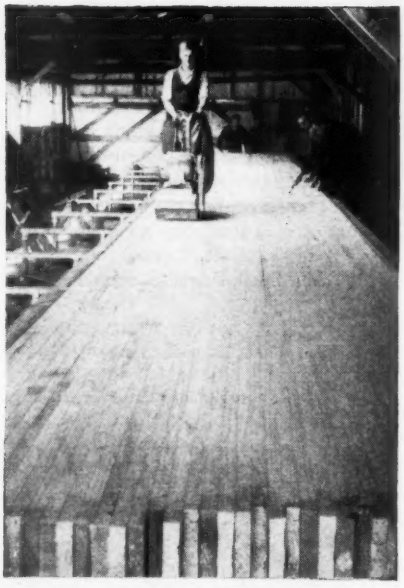


The grandstand at the Matamata racecourse.
Architects: Messrs. Jones, Adams, Kingston & Reynolds.
Contractors: V. Edmonds Ltd.

UP OVER DOWN UNDER

The new grandstand of the Matamata (New Zealand) Racing Club is notable for its cantilever timber roof, using laminated beams of radiata pine, constructed by the Lamwood Division of the Fletcher Timber Co. Ltd. at Auckland. These beams each measure 46 ft long, 12½ in. wide and taper from 43 in. to 16 in. deep. Each pair of beams was cut from a block of laminated wood weighing over four tons, and containing 5,000 super ft of timber. The radiata pine was kiln dried to a specific moisture content, which was kept constant by special 'black heat' tubes. Aerodux 185 resorcinol resin glue was used throughout, because of its unequalled durability, resistance to all weathers and stability in the event of moisture changes occurring in the wood.



Cleaning the surface of one of the 4-ton laminated blocks by means of a floor sander.

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AP433

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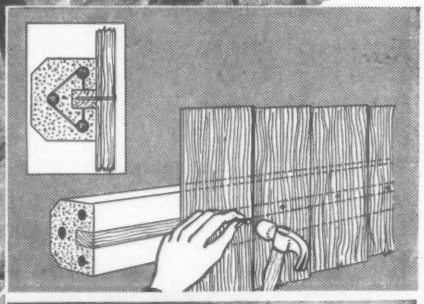

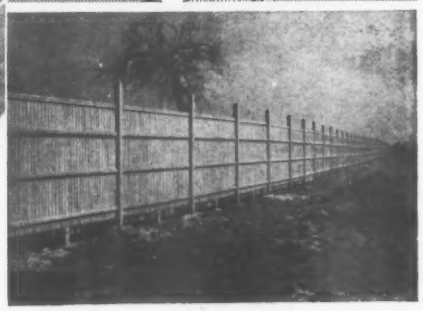

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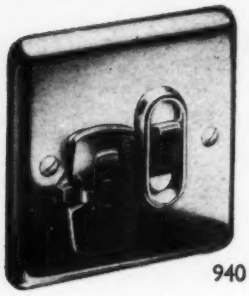

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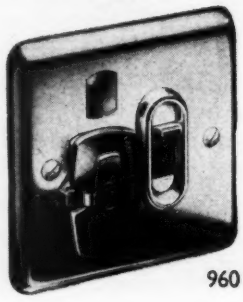
WITH PILOT-LAMP



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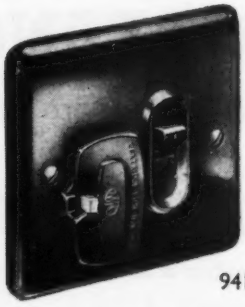

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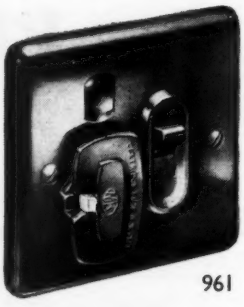

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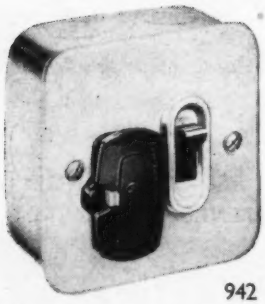

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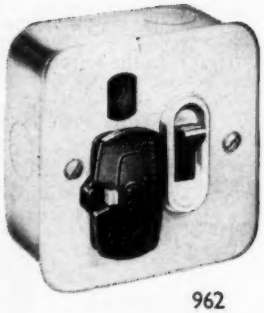

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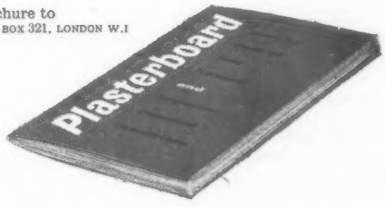

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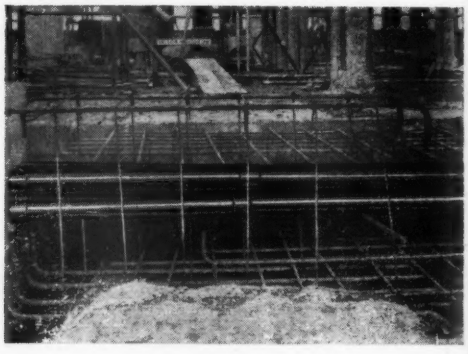

The photographs show Temple Tubes being installed, completely encased in concrete foundations, as part of a drainage system at the new Cow & Gate Factory at Lostwithiel.

Chief Architect: F. M. Broad, Esq., F.R.I.B.A., Messrs. Cow & Gate Ltd., North Street, Guildford.
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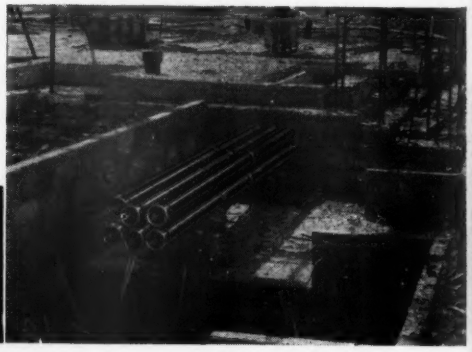

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THE LARGEST DESERT

The Sahara Desert in North Africa is the largest in the world. It is approximately 3,200 miles from East to West, from North to South it varies between 800 and 1,400 miles. The area covered is more than 3½ million square miles. The land level varies from below sea level to the mountain Emi Koussi (11,204 feet). The diurnal temperature range in the West Sahara may be more than 80 deg. F. (45 deg. C.) in 24 hours.

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Comets are so tenuous that it has been estimated that even their heads contain no mass in excess of 20 miles in diameter and that 10,000 cubic miles of tail contain less matter than a cubic inch of air. These tails, as in the case of the Great Comet of 1843, may trail out to 200,000,000 miles.

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The aspidistra (Aspidistra elatior) was introduced as a parlour palm to Britain from Japan and China, c. 1822. The height attained by these plants is generally 24 to 30 inches, though a plant growing in the shade may have its leaves elongated. A reported height of 42 inches is very much doubted by the Royal Botanic Gardens at Kew, Surrey.

THE LARGEST HAILSTONES

The largest authenticated hailstones recorded were those weighed and measured, dissected and photographed at Potter, Nebraska, U.S.A., on 6th July, 1928. One weighed 1½ lb. and was 17 inches in circumference. There is an older and less well established record of 4½ lb. at Cazorla, Spain, on 15th June, 1892, but this may have been coalesced stones.

THE OLDEST NEWSPAPER

The "Berrow's Worcester Journal," published in Worcester, England, enjoys the distinction of being the oldest continuously produced newspaper in the world. It was founded in 1690 and has appeared weekly since June, 1709. Of daily papers the oldest is "Lloyd's List" which is the shipping intelligence bulletin of Lloyd's London, established in 1734.

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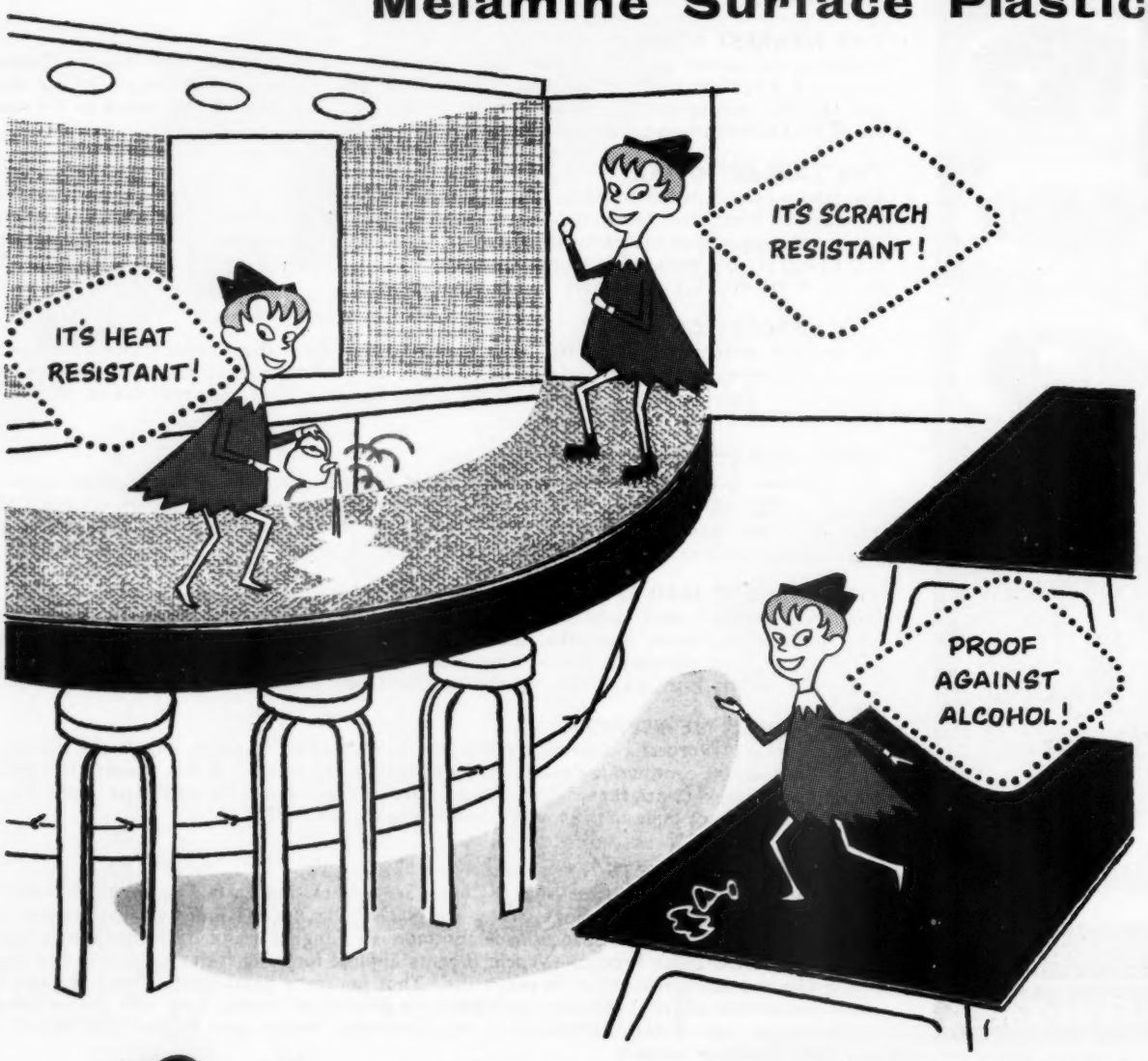

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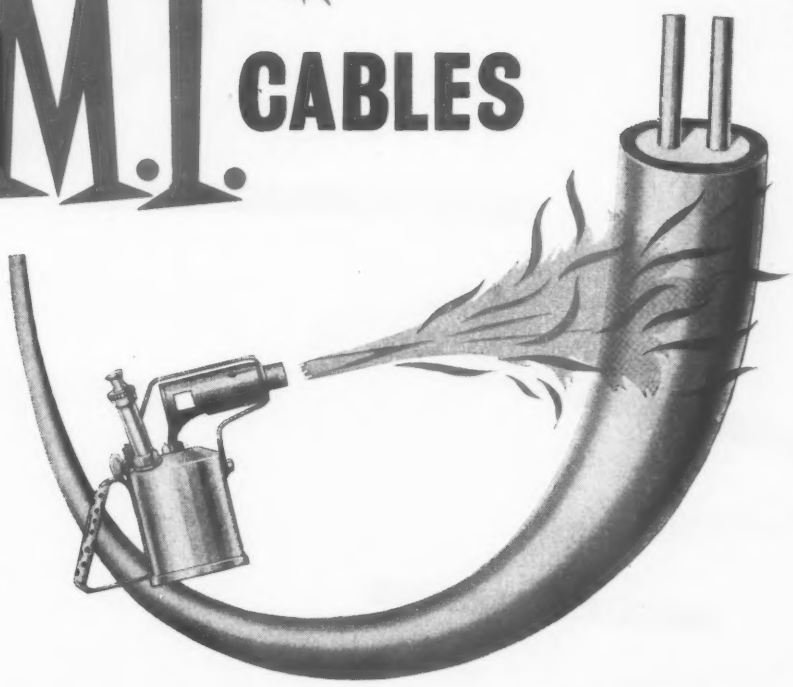

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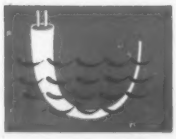

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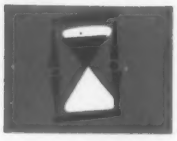

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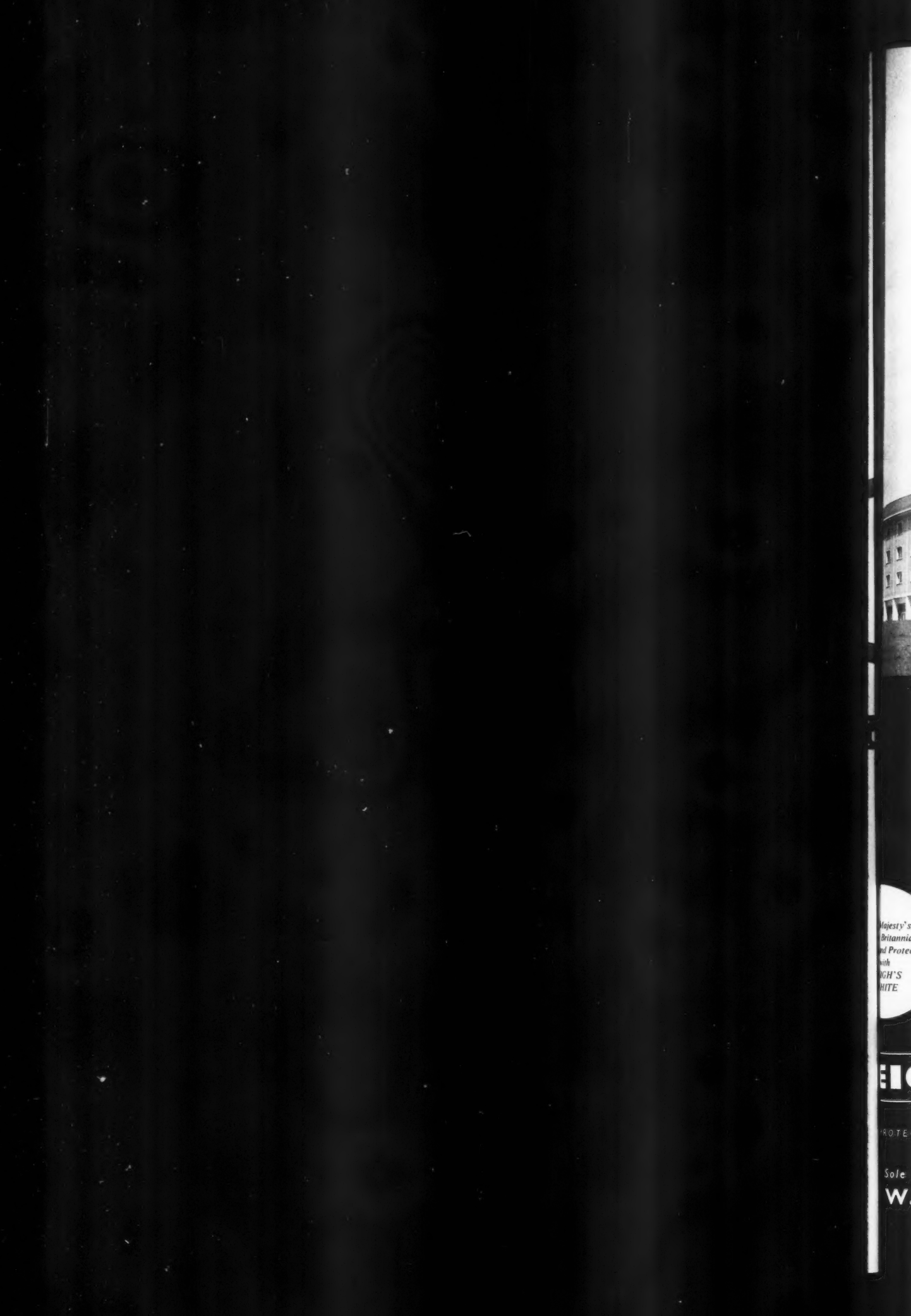

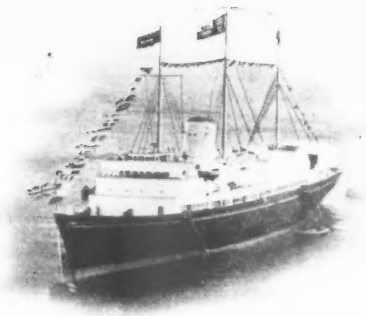

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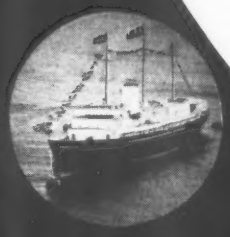

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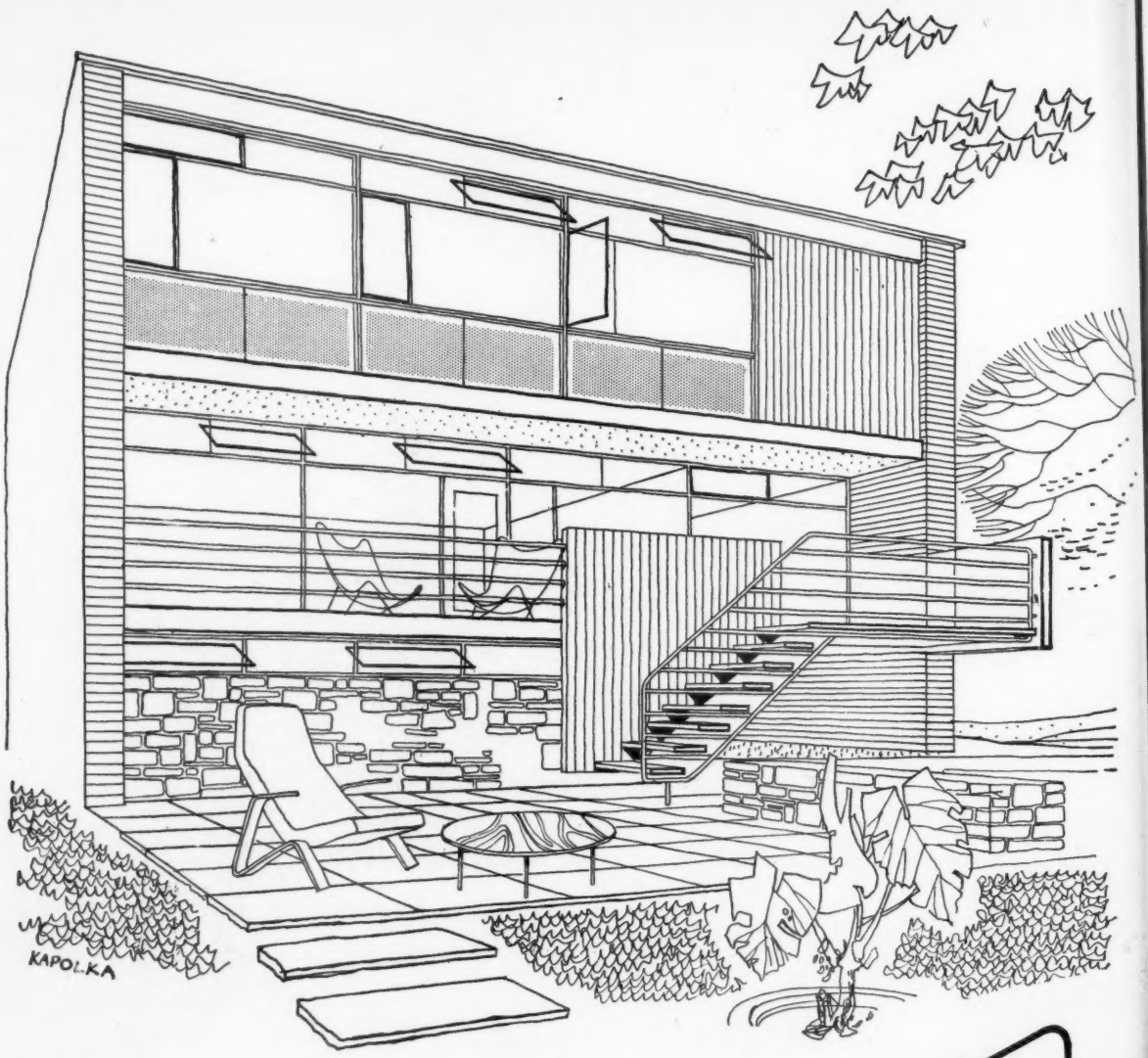

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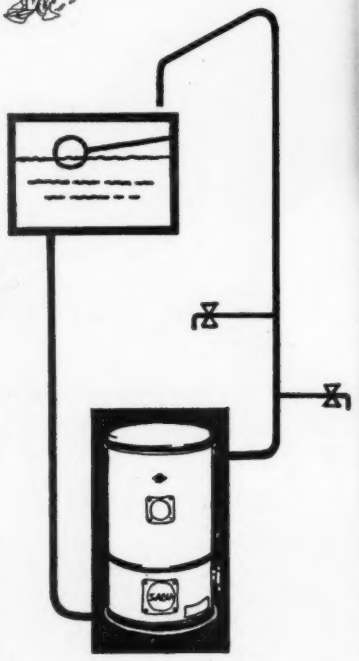

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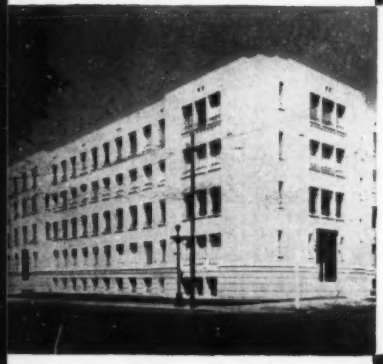

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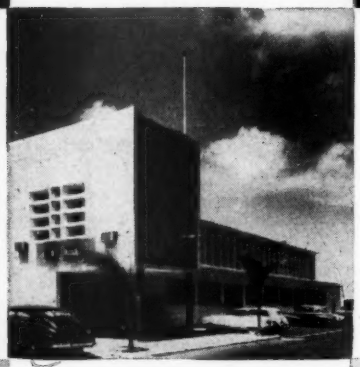

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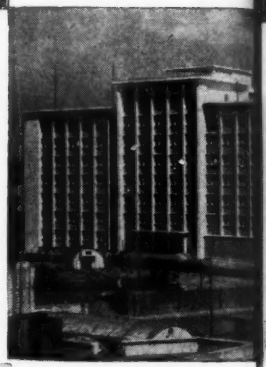

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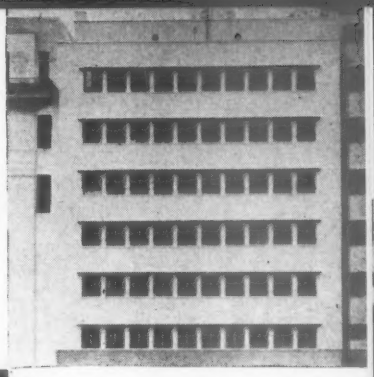

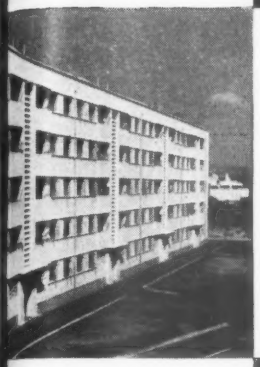

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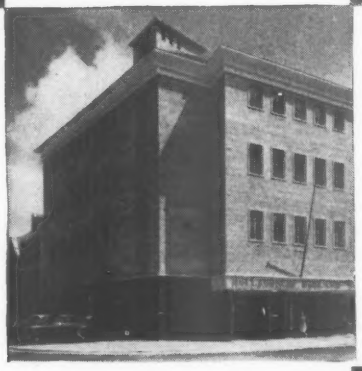

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Architects:
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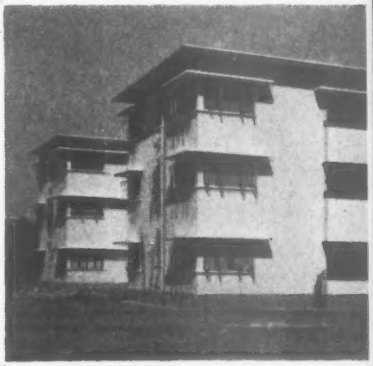

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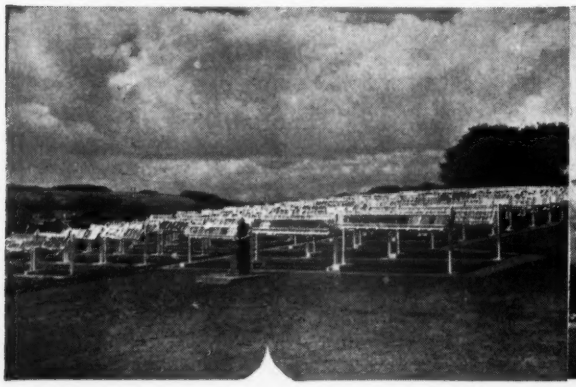

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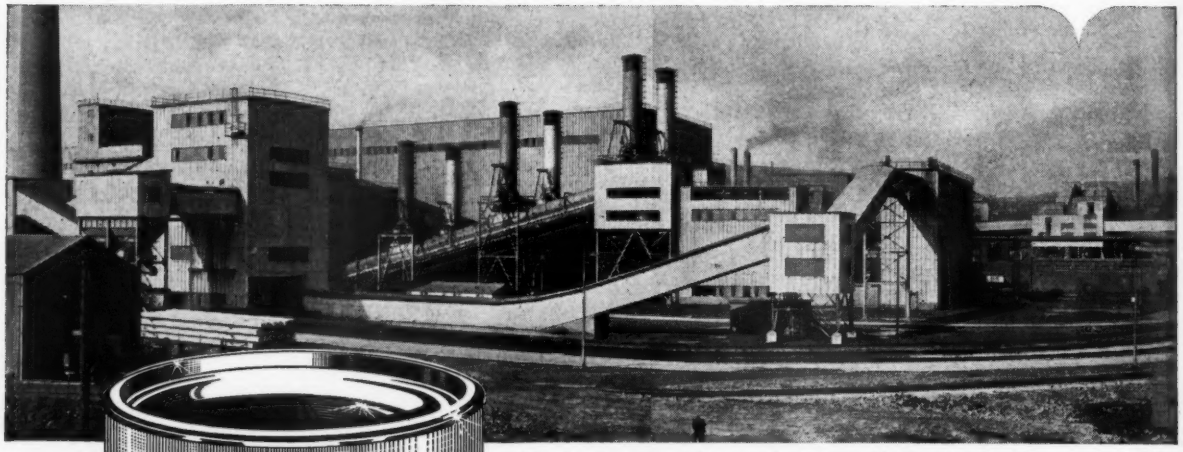
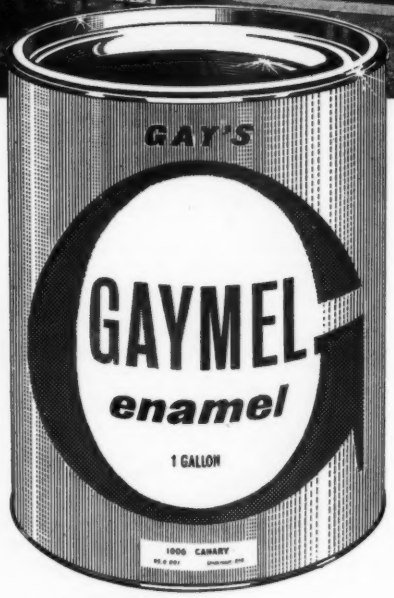


The Ore Preparation Plant at the Margam Works of the Steel Company of Wales.



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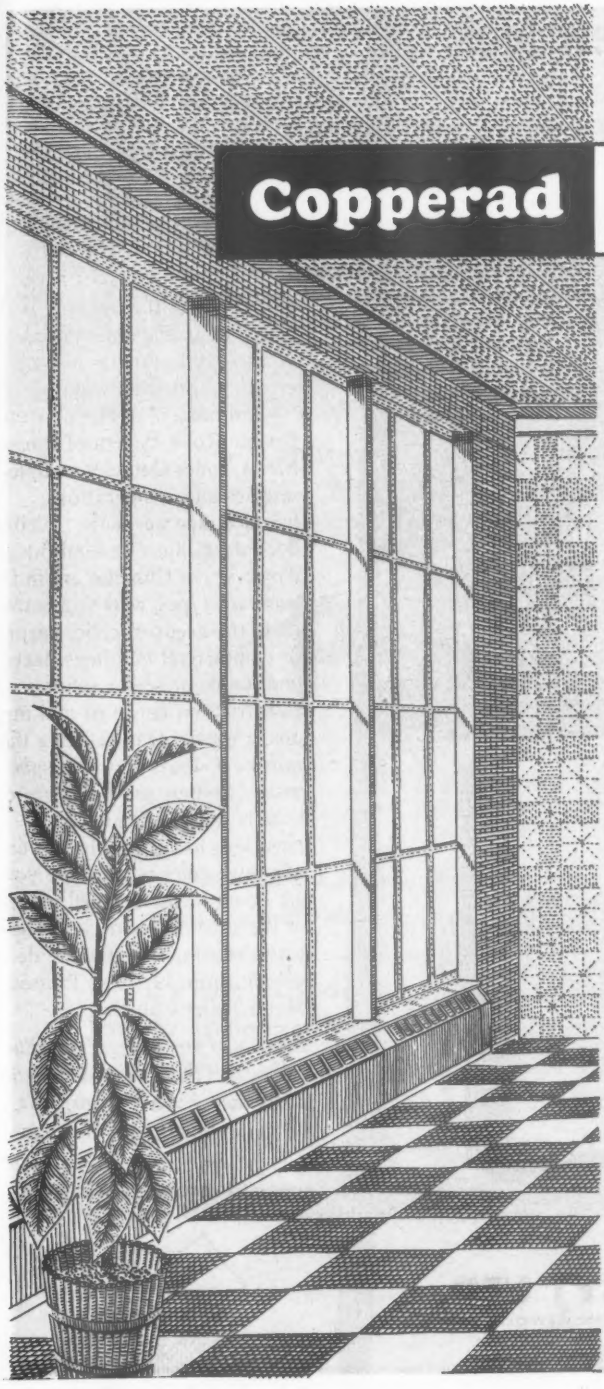
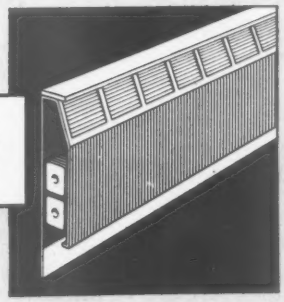


Copperad *Sill-line*



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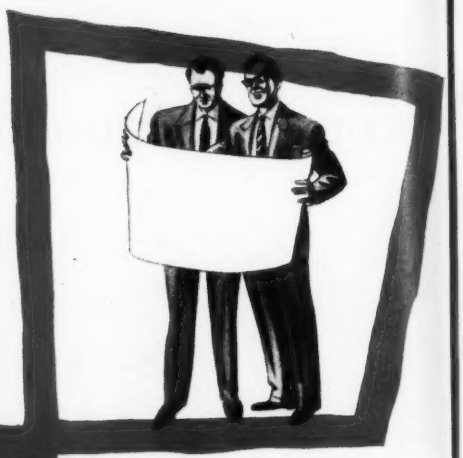

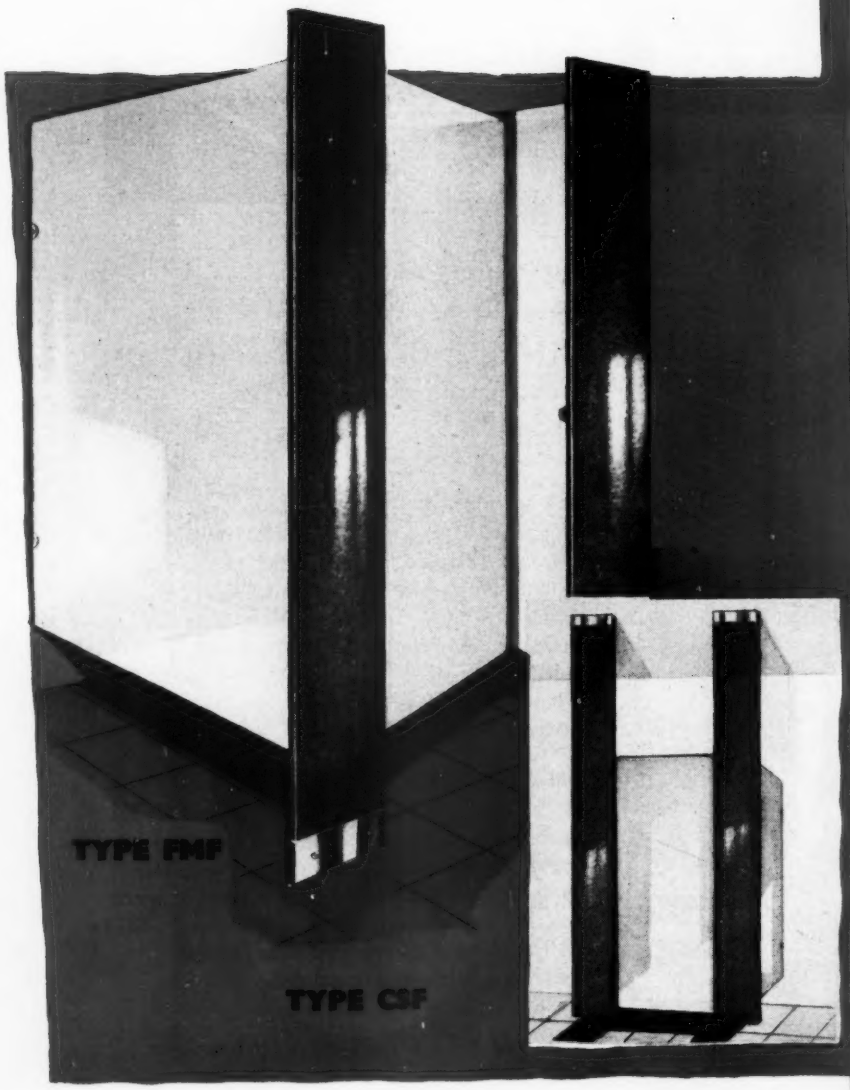

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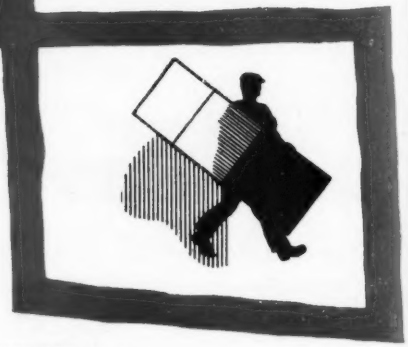

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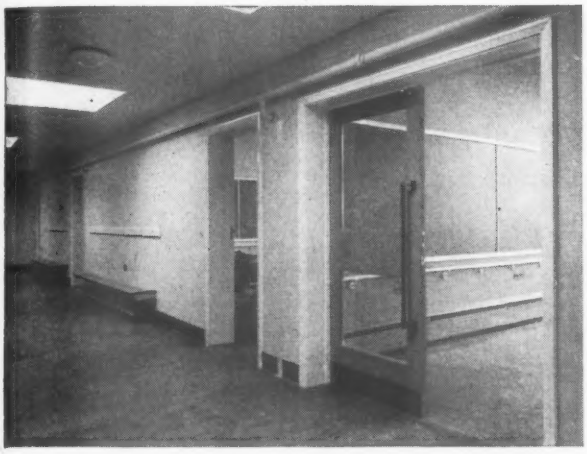

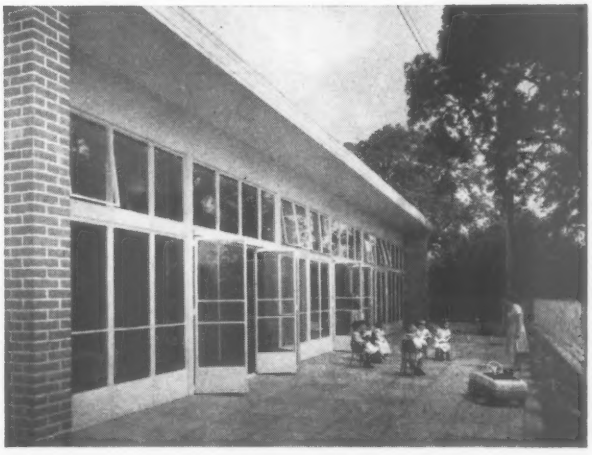

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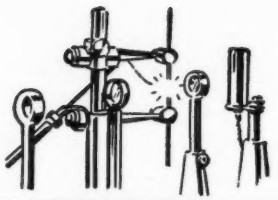
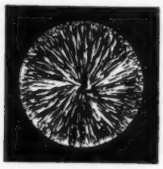
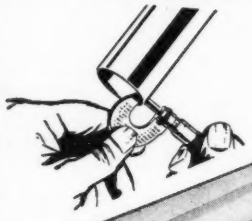


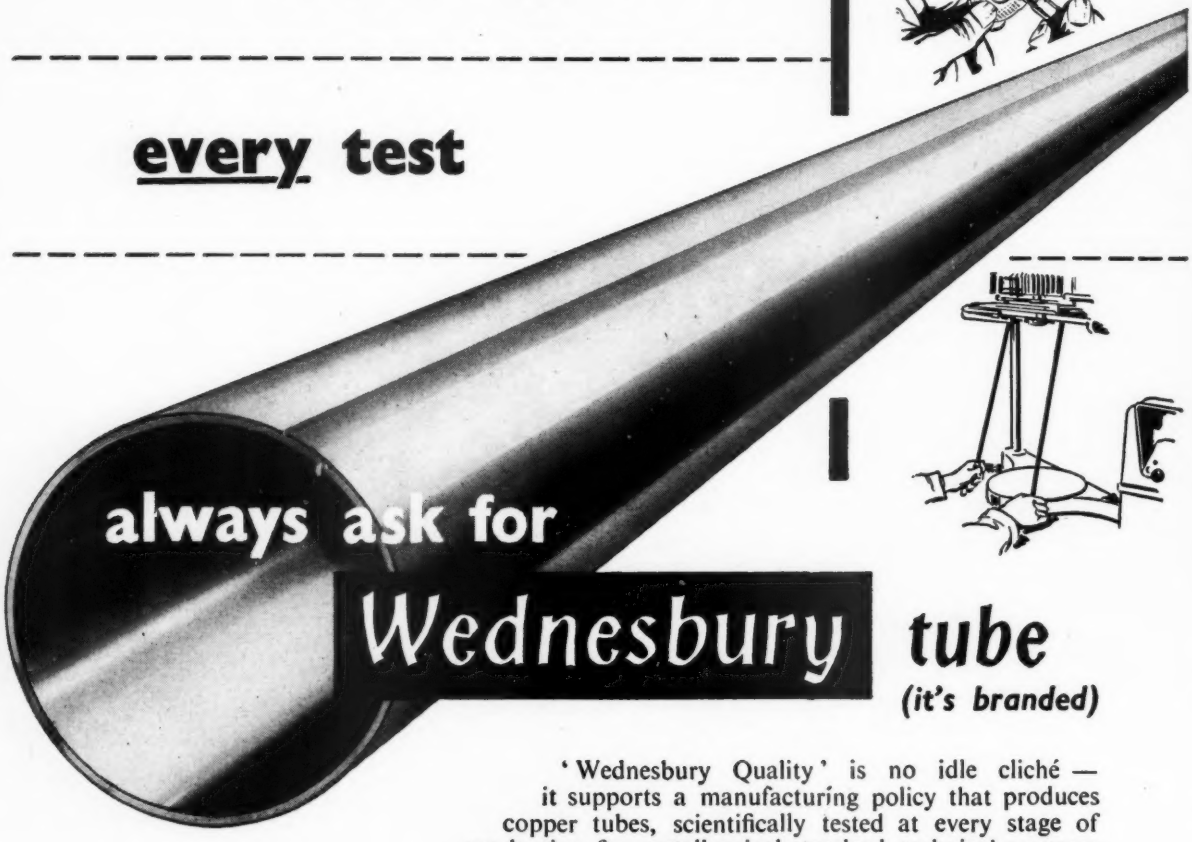
that will



stand up to



every test



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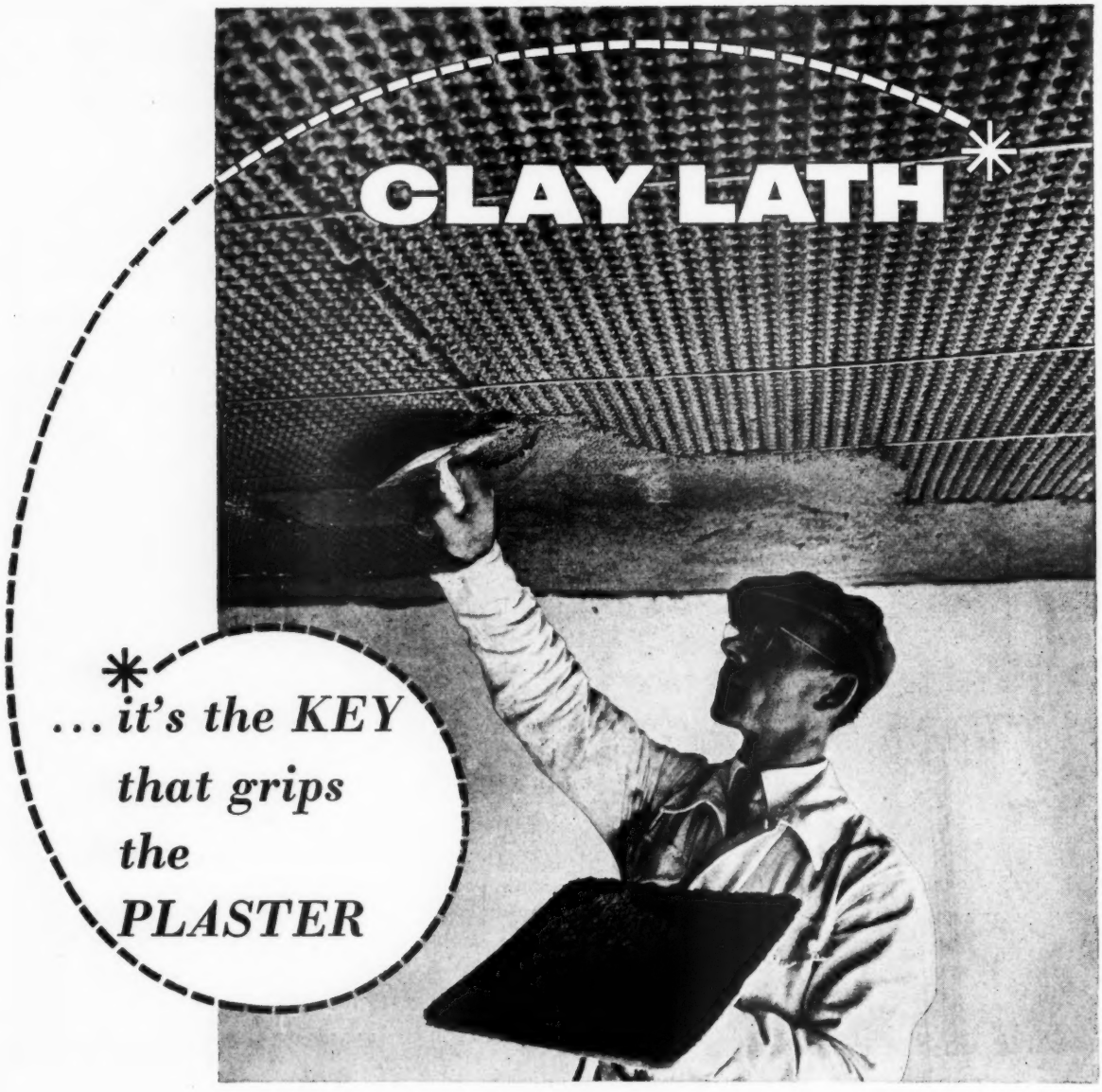

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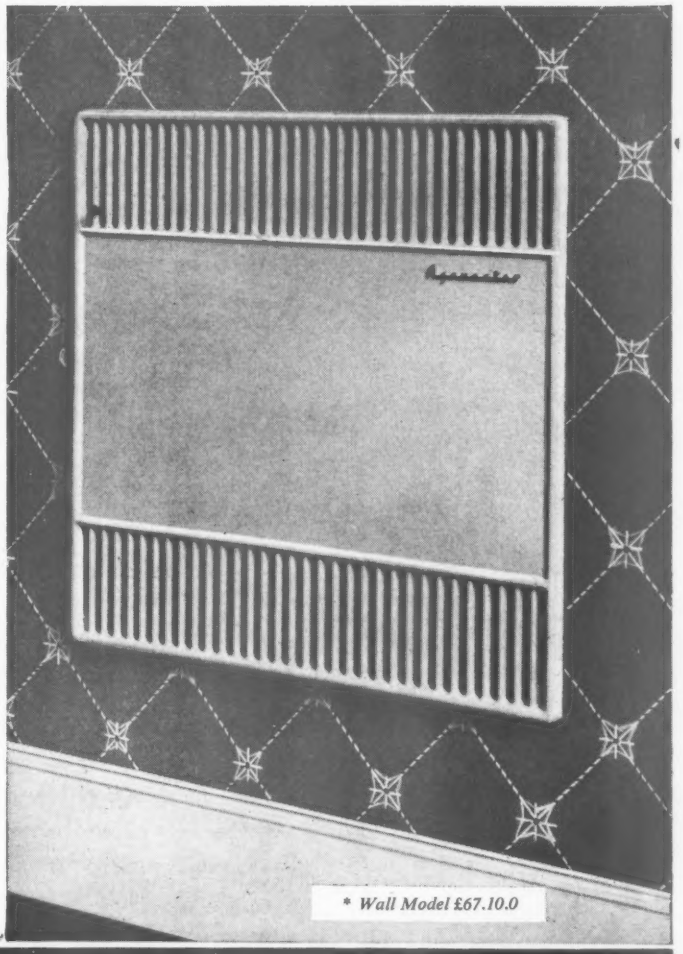

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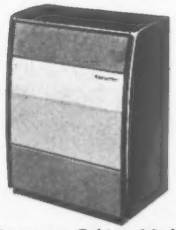
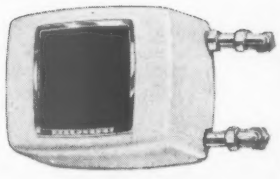


Agavector Cabinet Model



Agavector Junior Model

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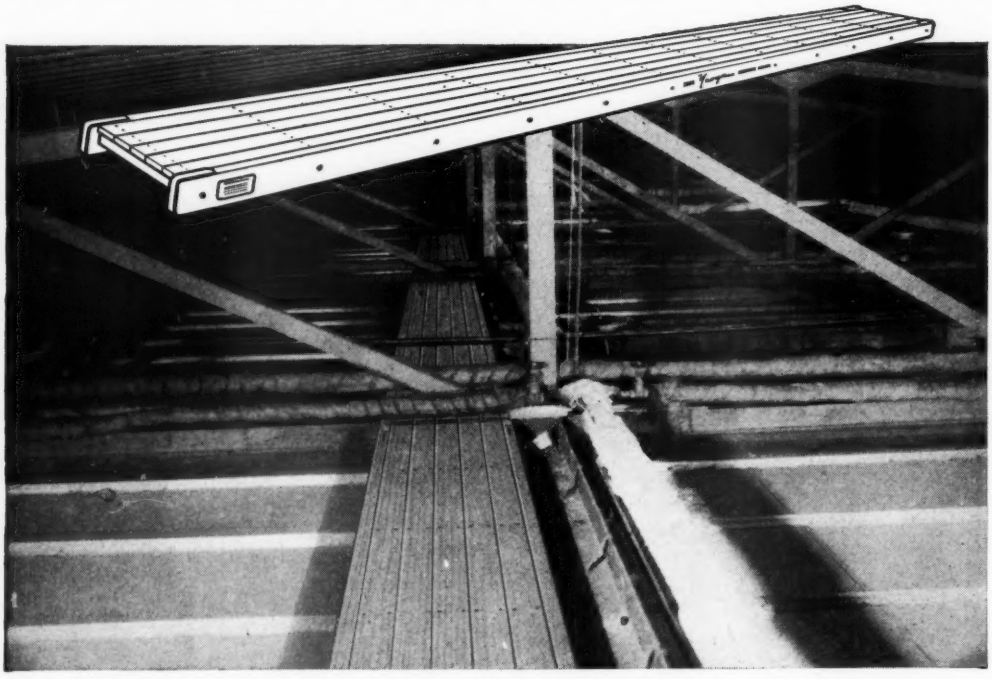

A walkway for service access installed in the roof of The Metal Box Company Ltd. factory at Westhoughton. Only end support is necessary provided by the compound angle trusses giving safe access over the suspended ceiling

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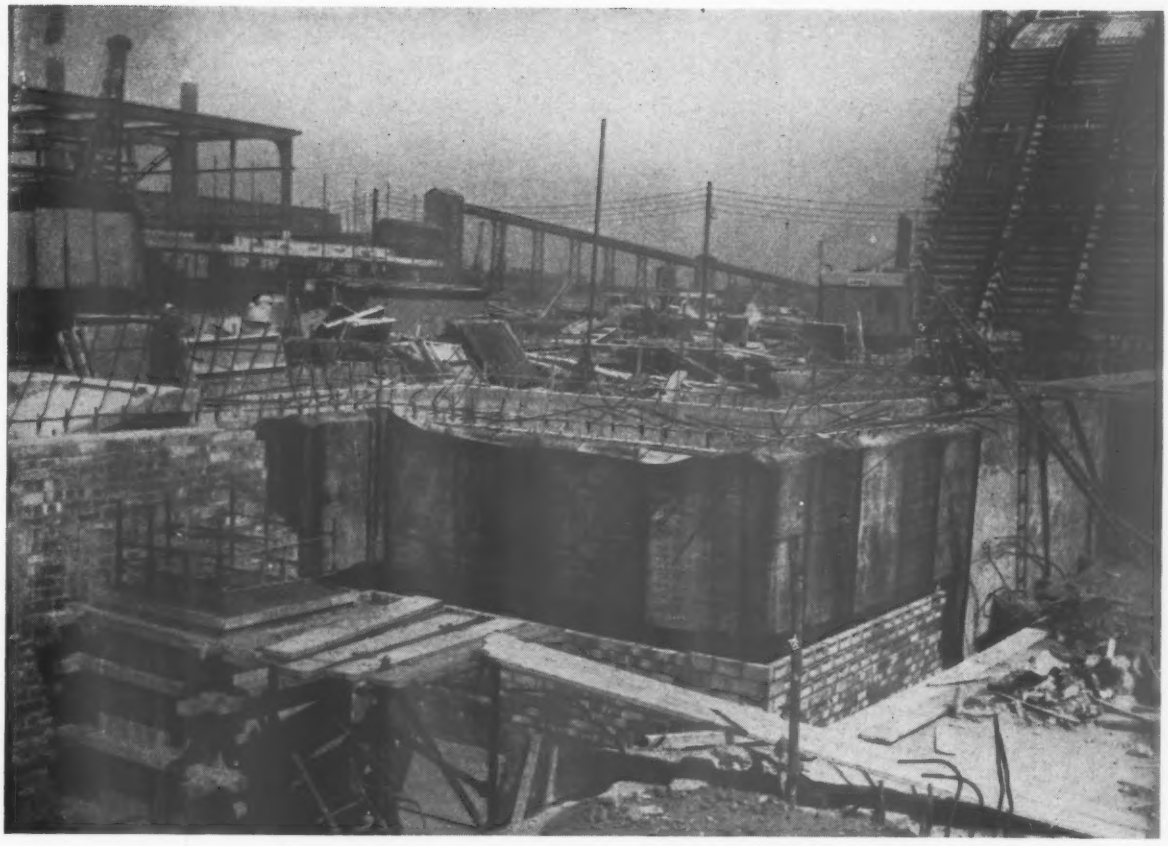

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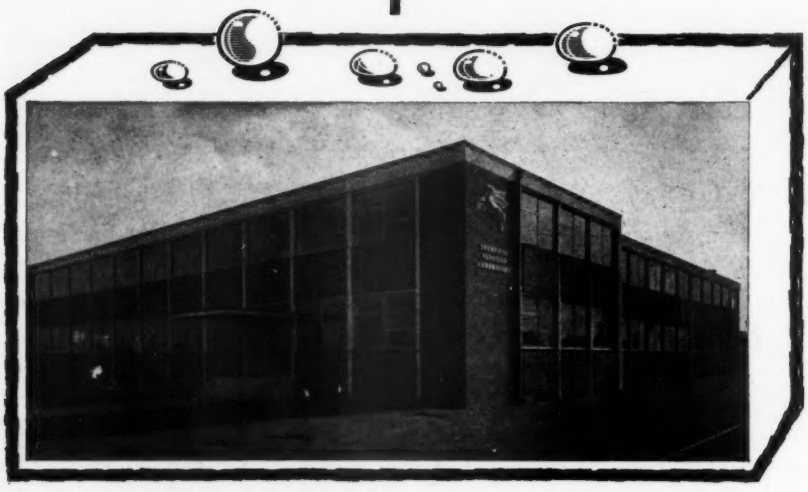

The external concrete frame of this imposing new Technical Service Laboratory for the Mobil Oil Company at Coryton (Architect S. Greenwood A.R.I.B.A.) is faced with precast concrete units treated with a water repellent based on DRI-SIL silicone. *Photo by courtesy of Mobil Oil Company Ltd.*

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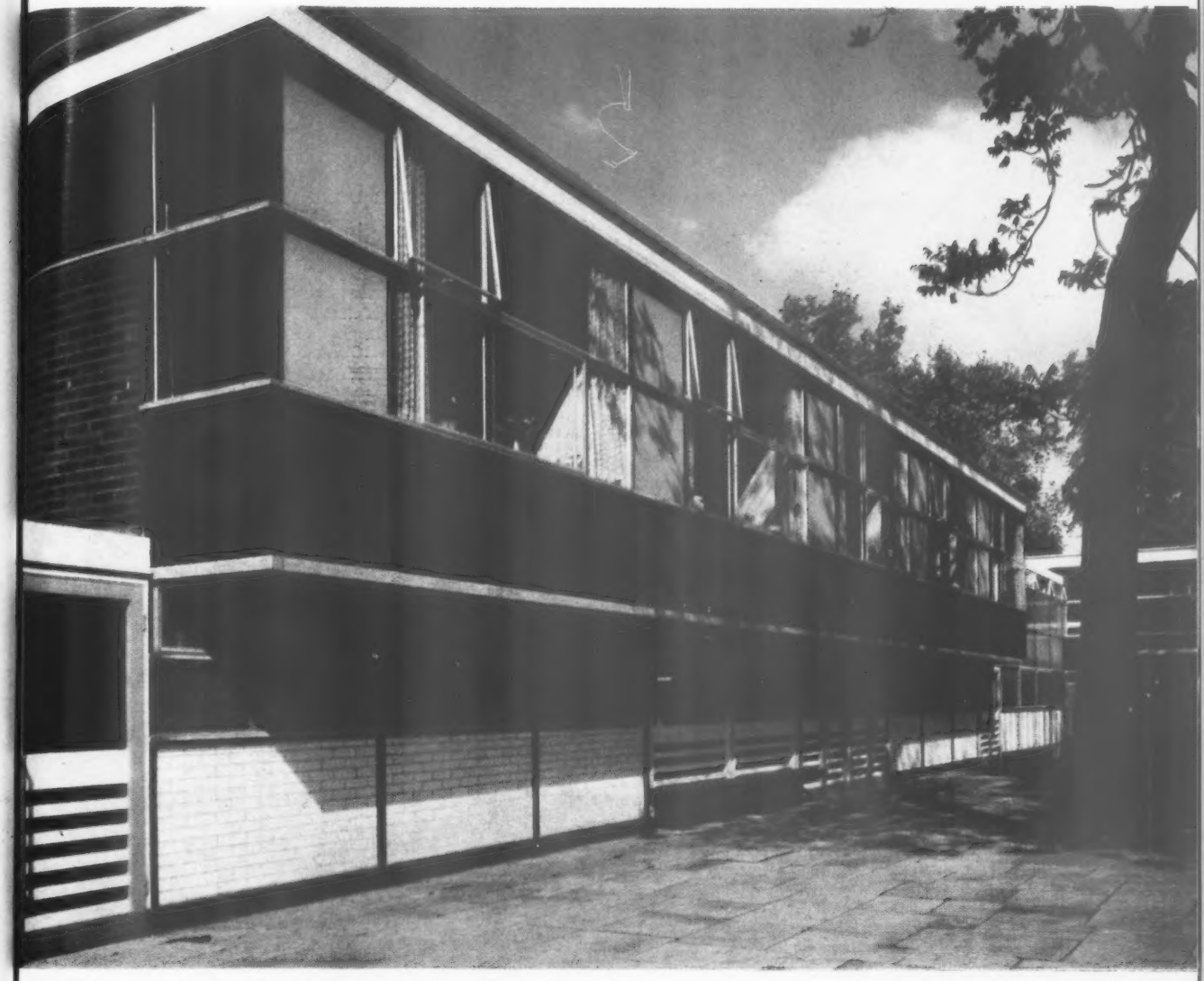

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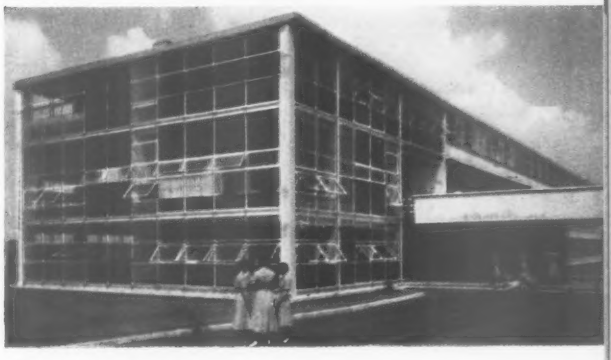

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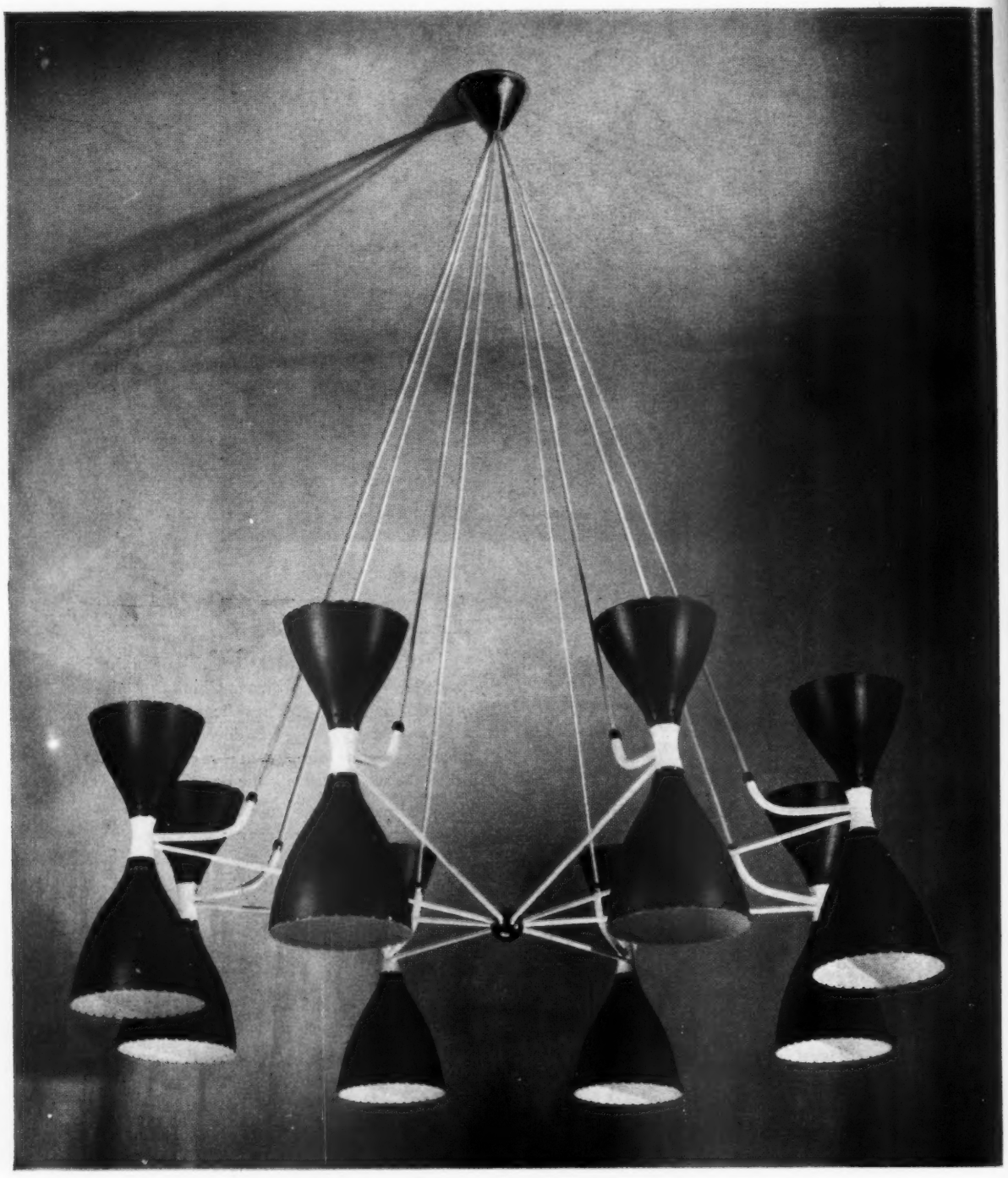

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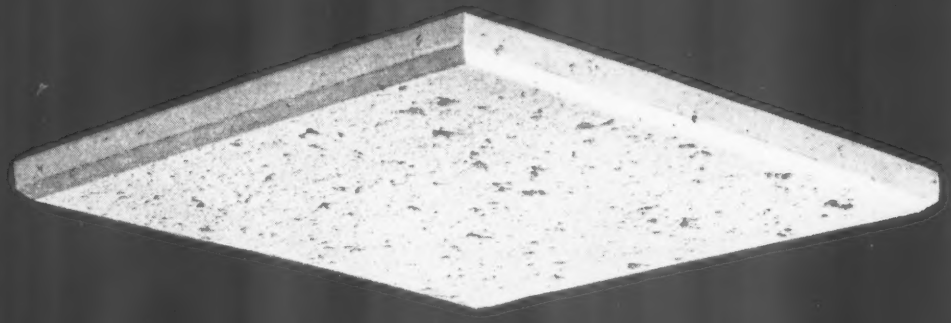

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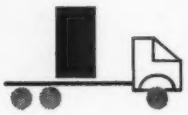

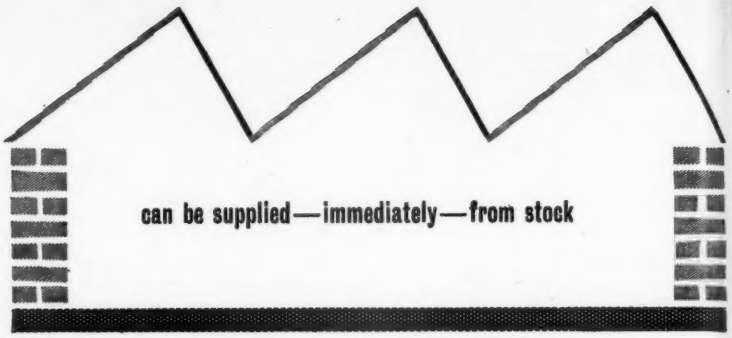

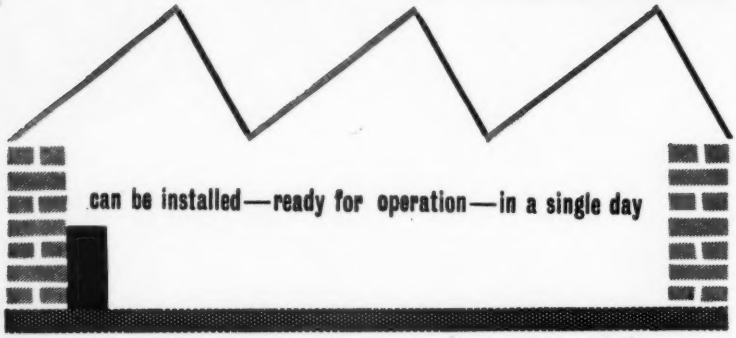

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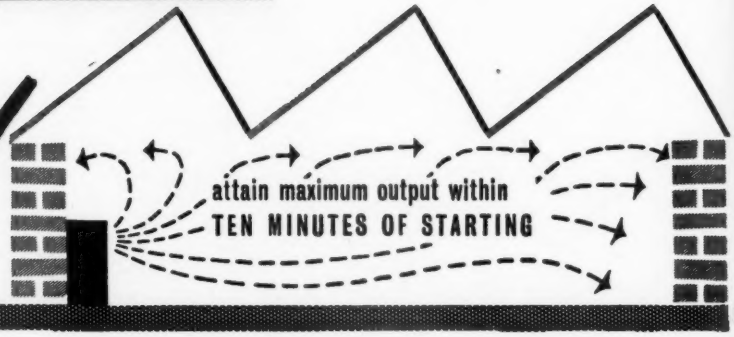

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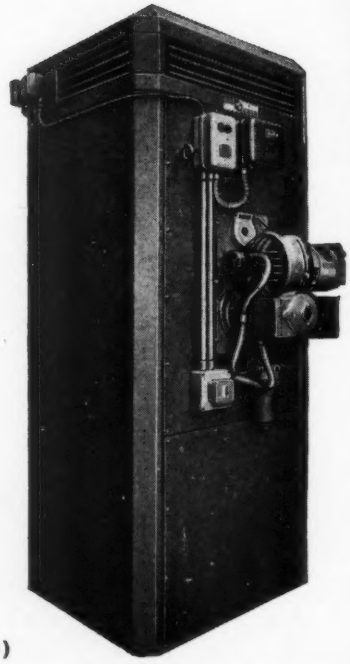

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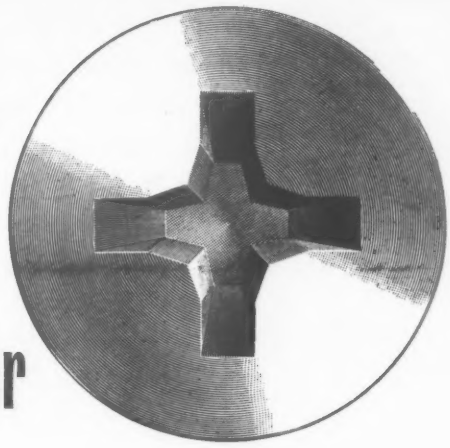

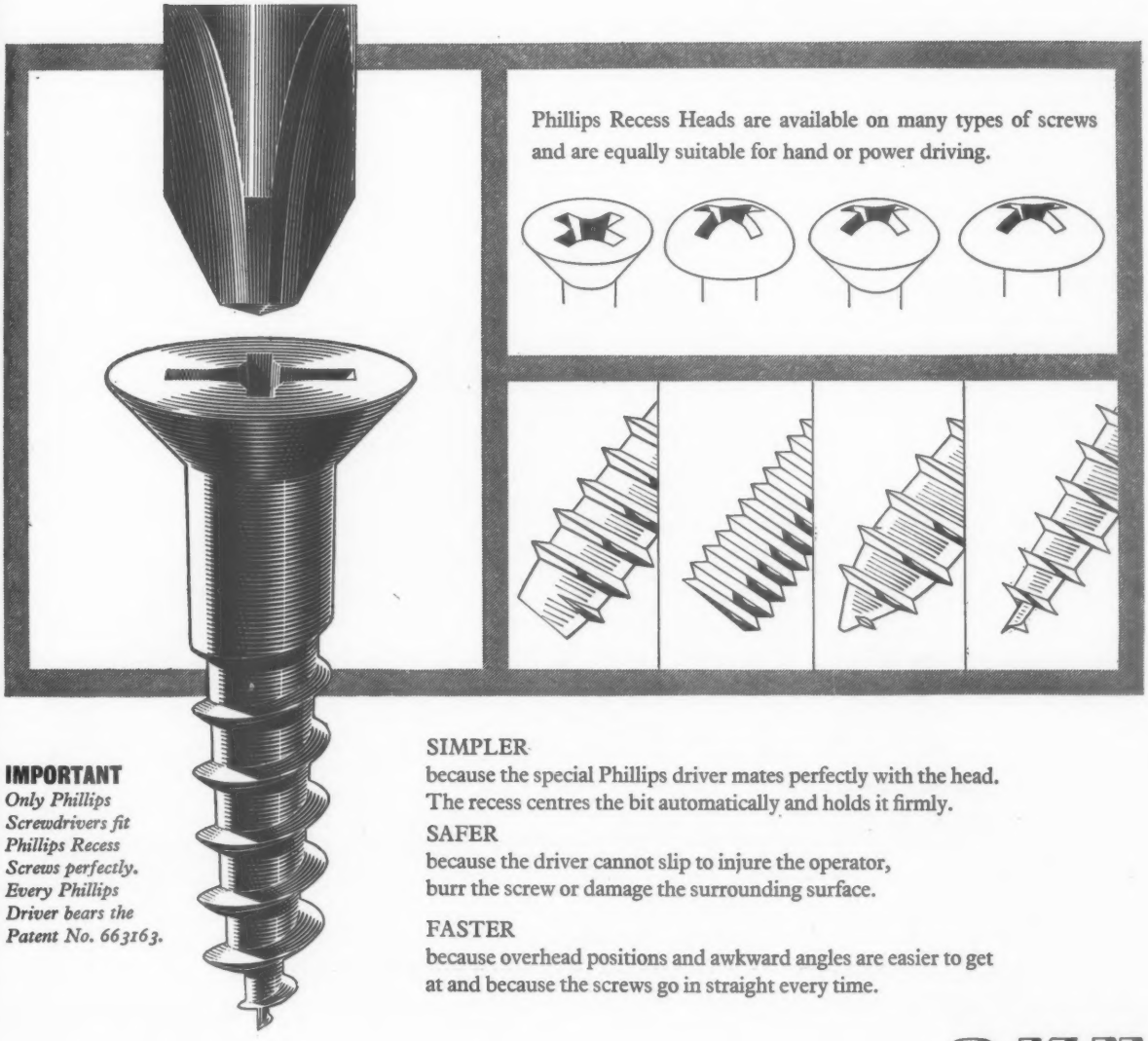

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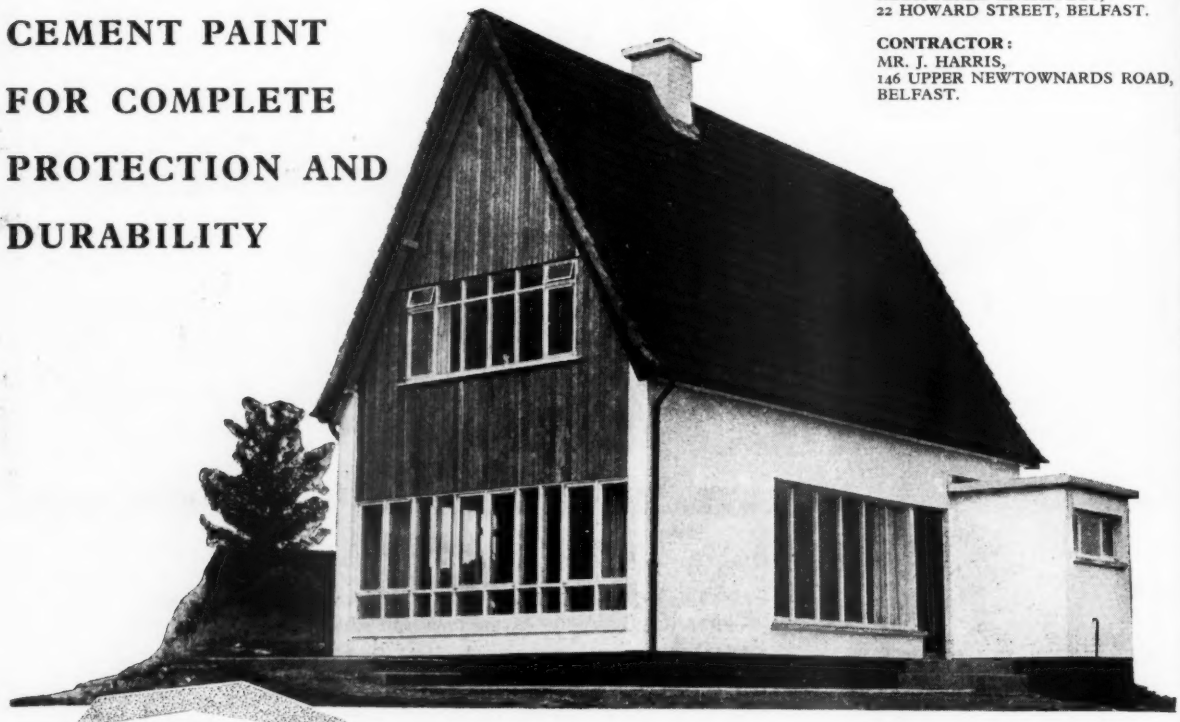

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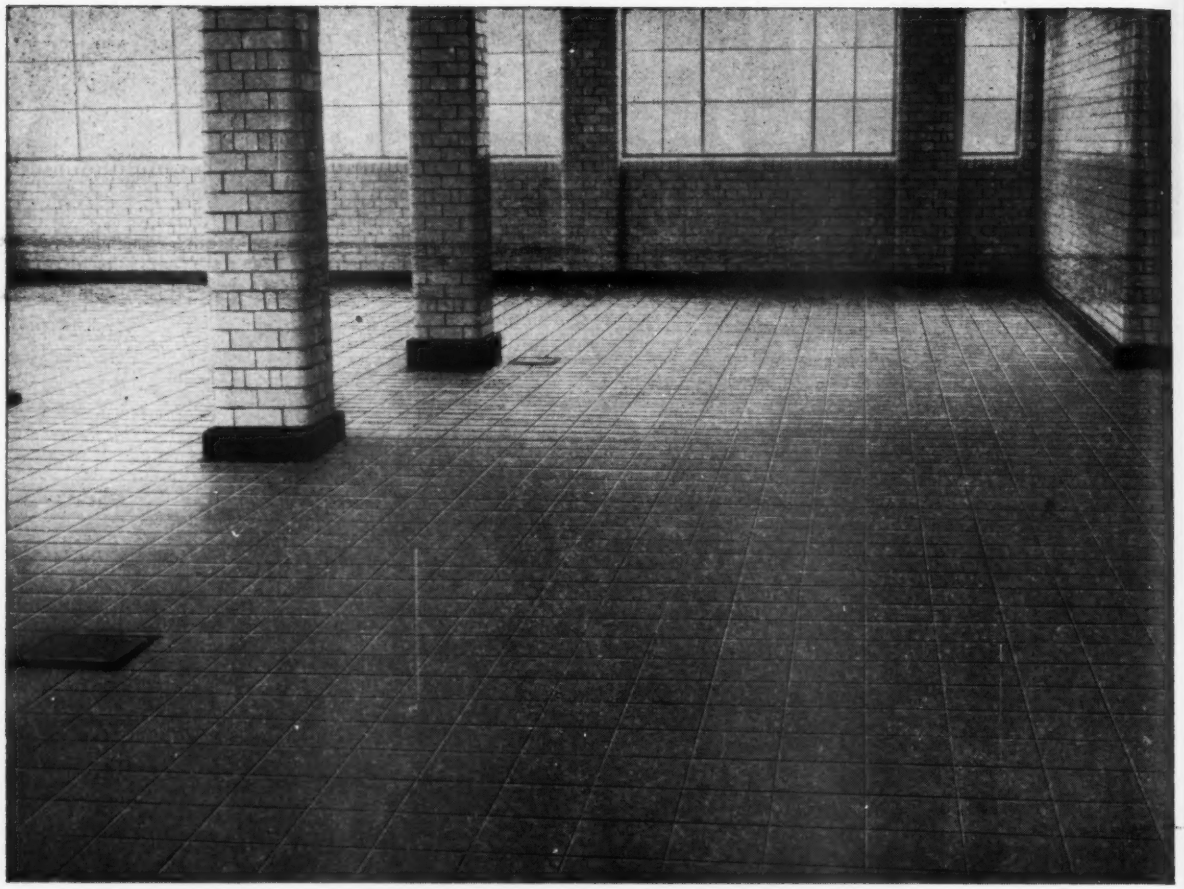

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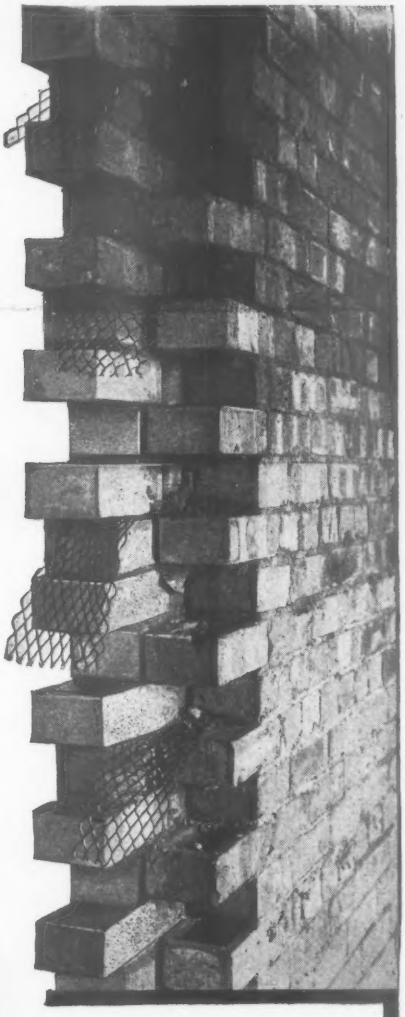

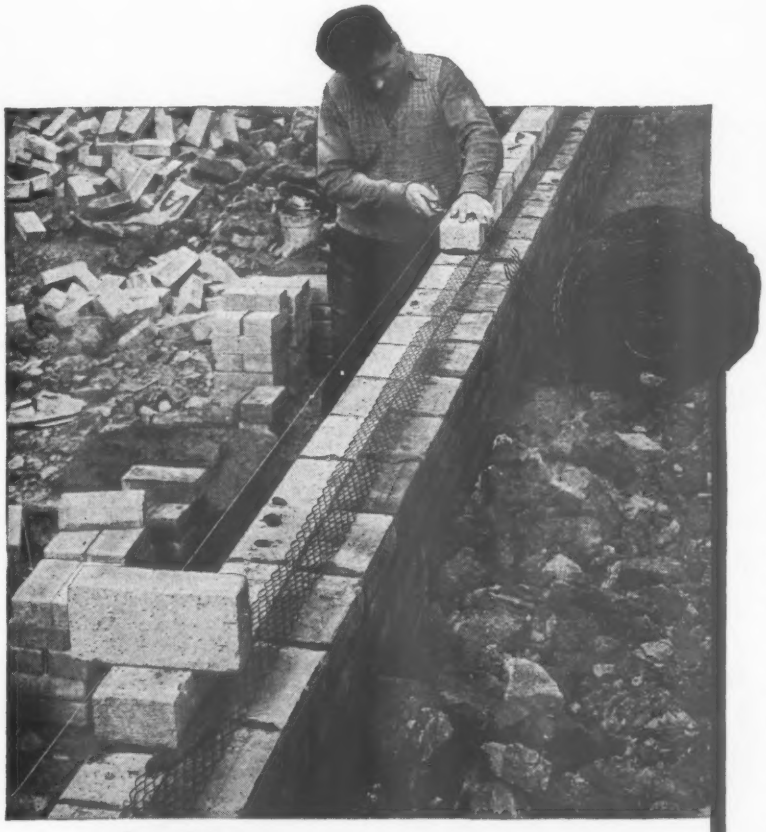

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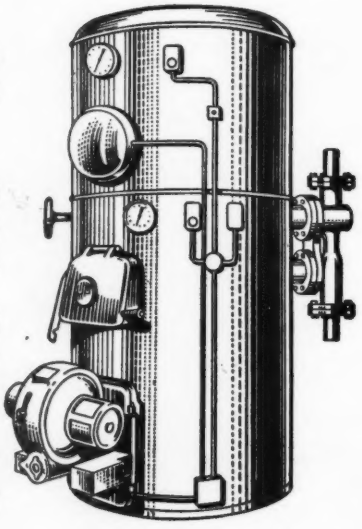

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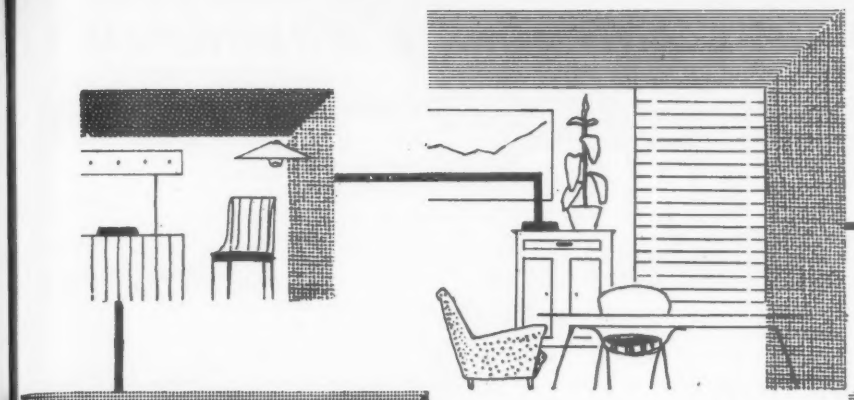

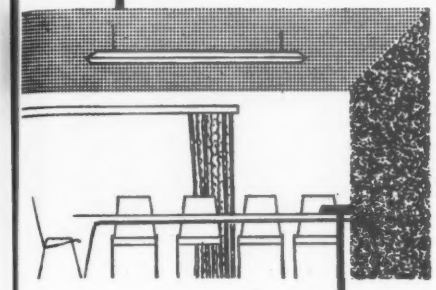

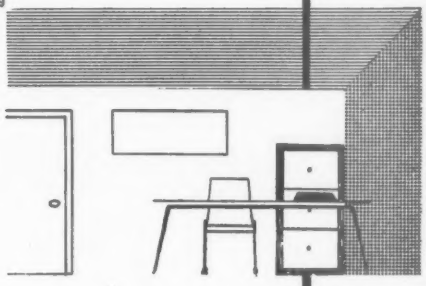

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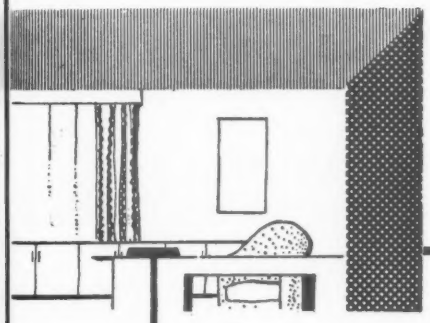

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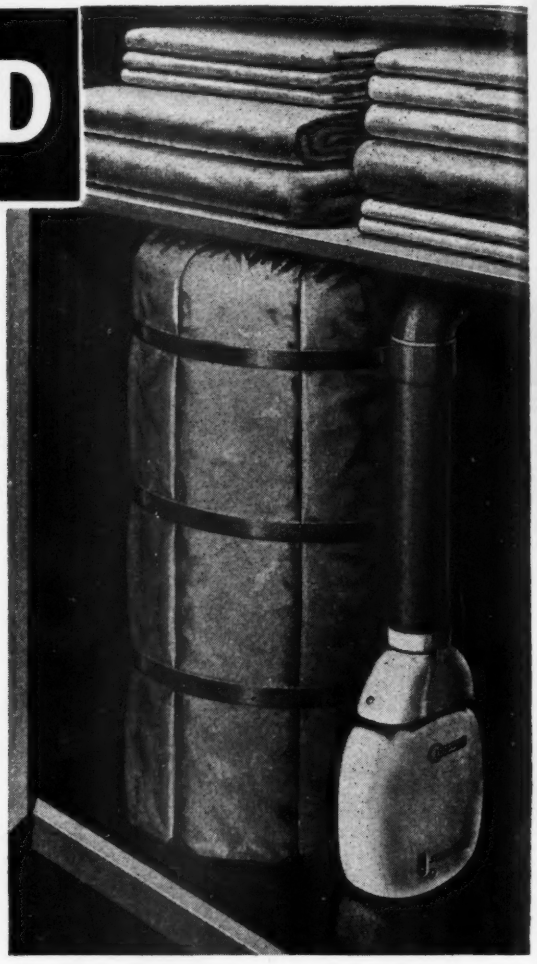

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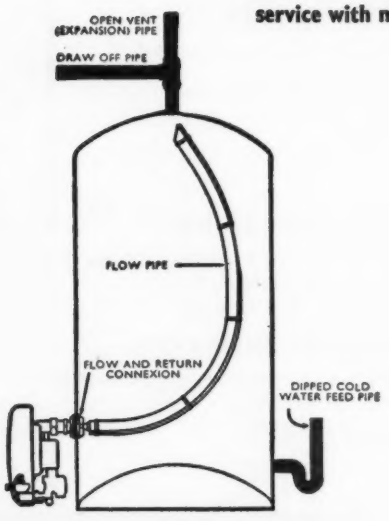

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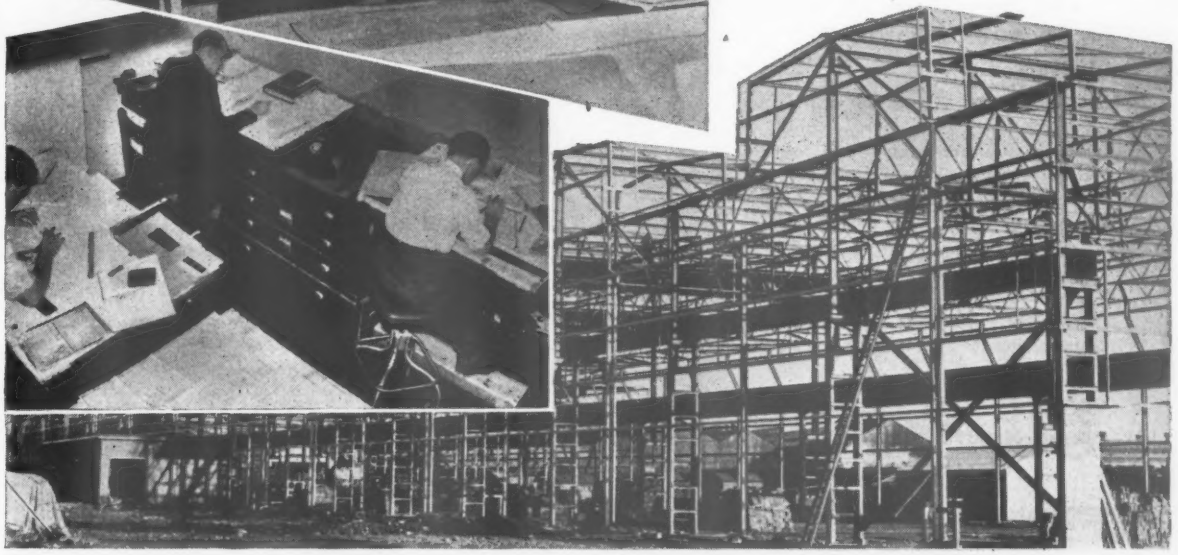

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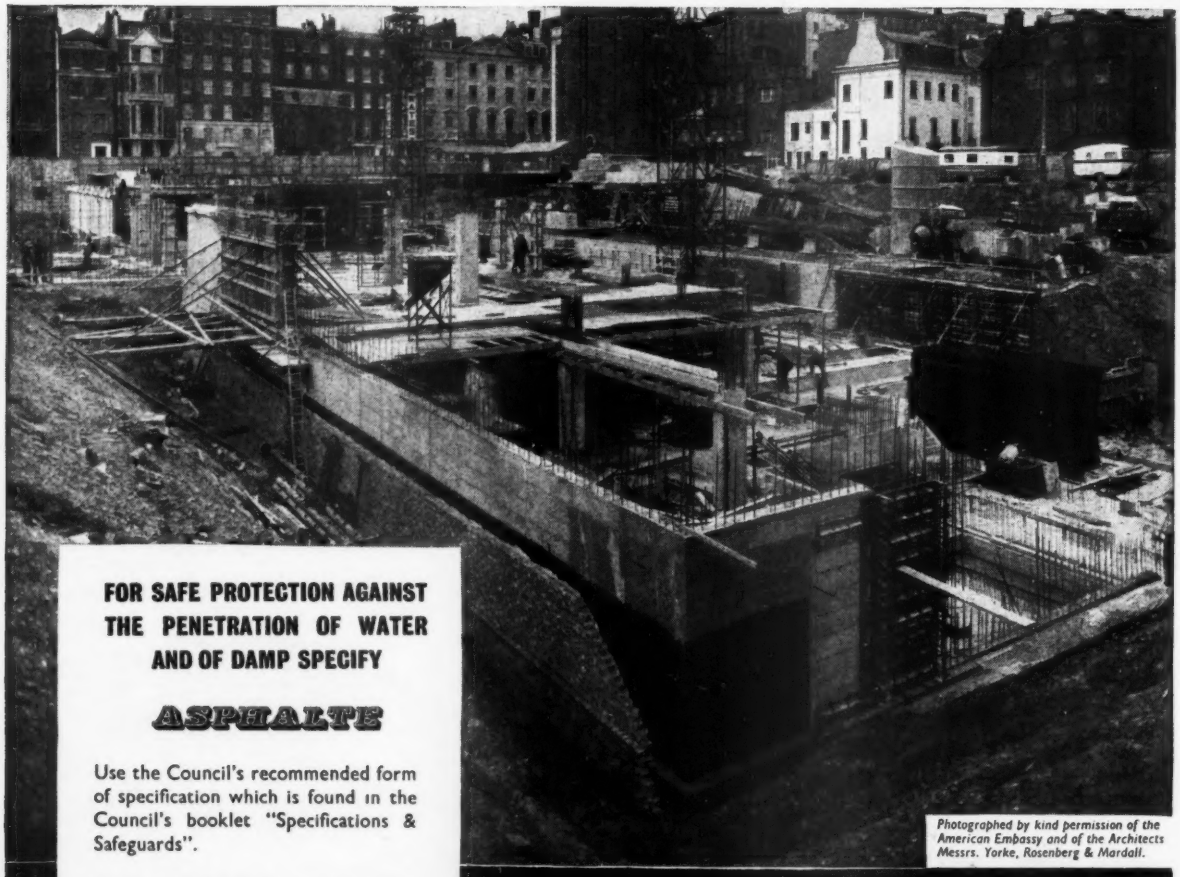

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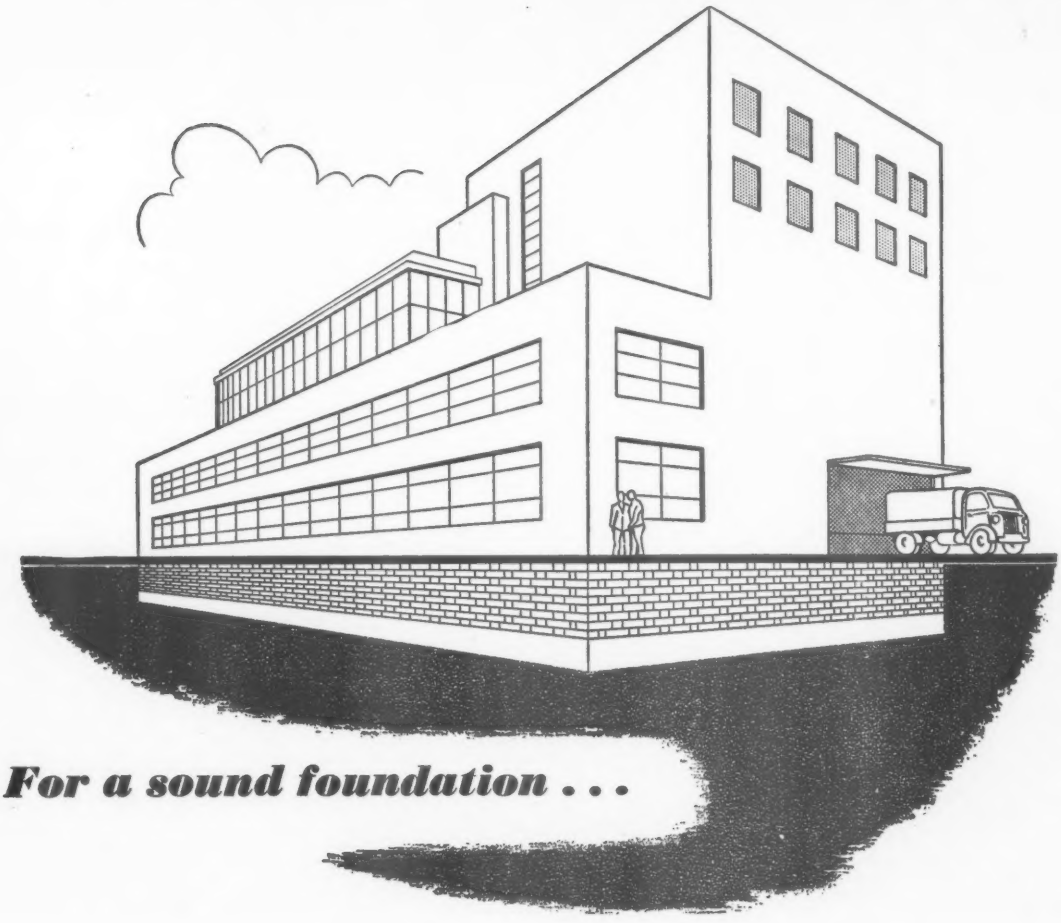

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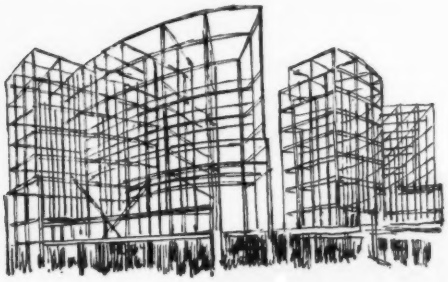
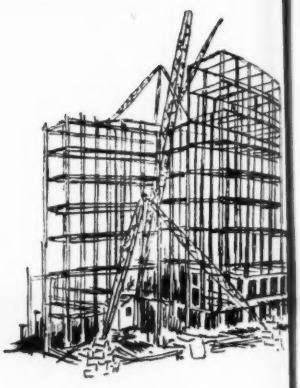
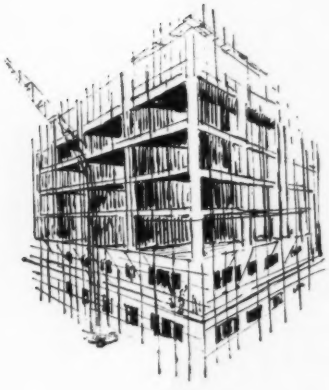




Unique



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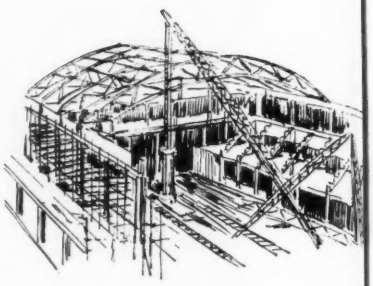

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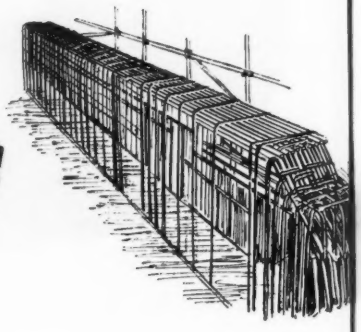

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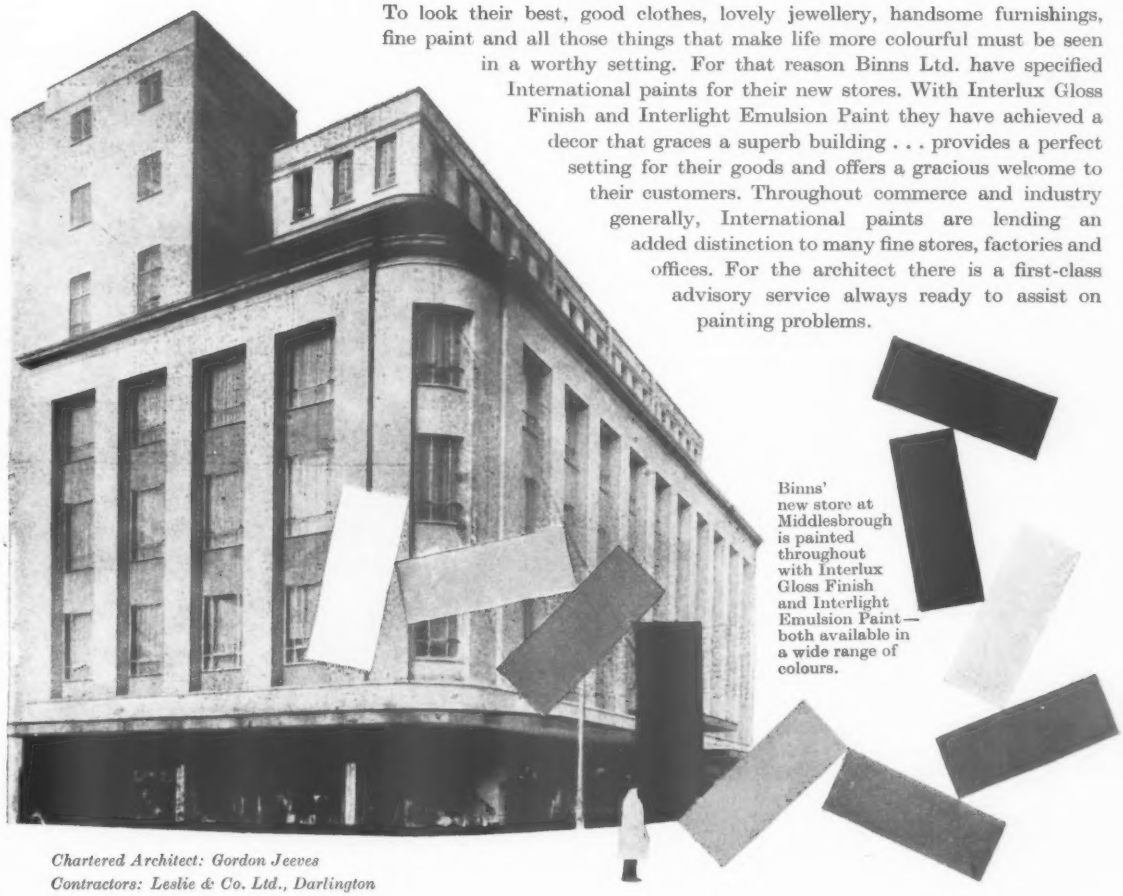

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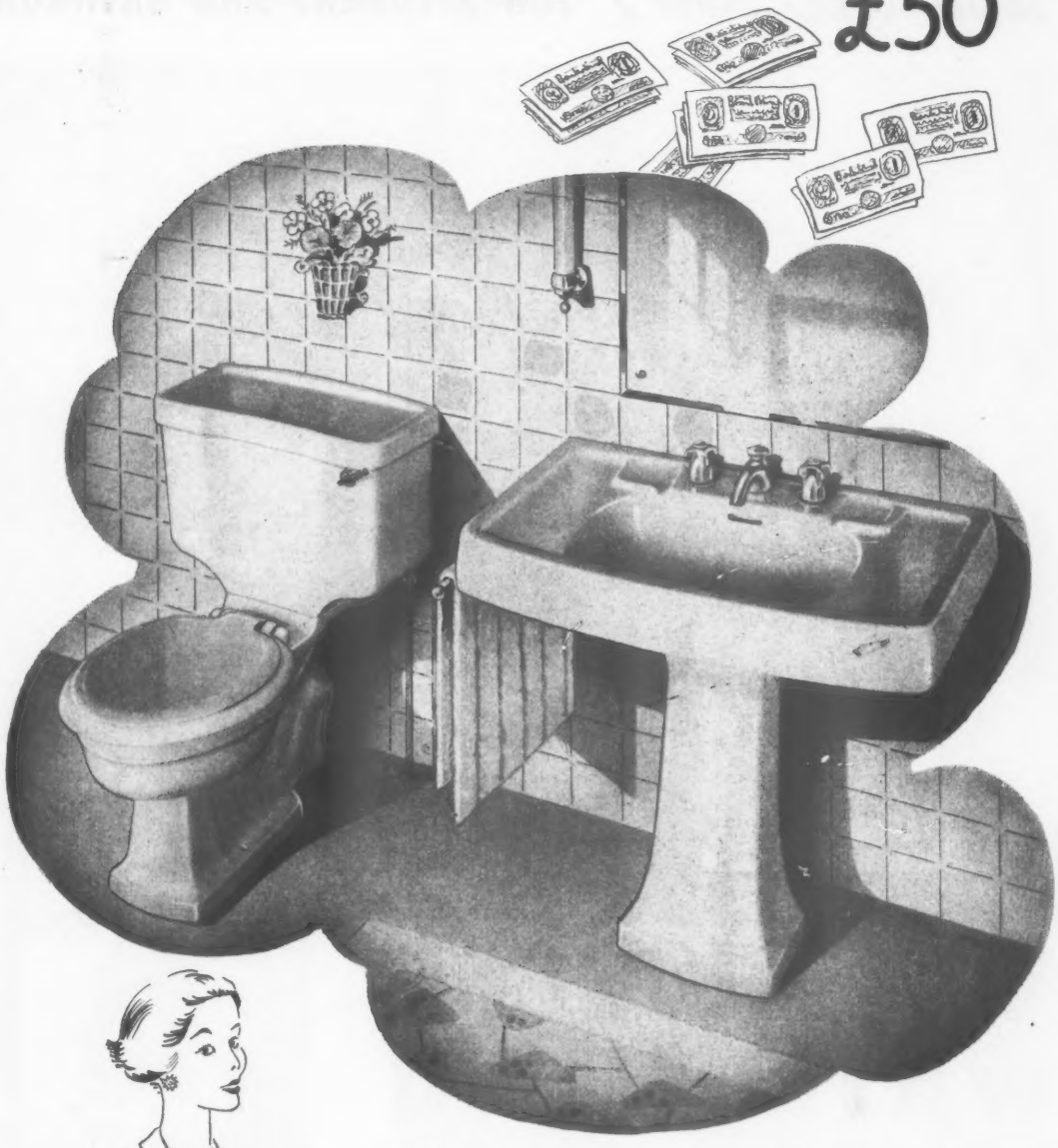

"I must get Fred to make our downstairs Cloakroom as nice as the Joneses.

I saw some lovely TWYFORDS' colours in those plumbers' merchants' showrooms—Shell Pink, Turquoise and Sky Blue etc.

Then I'd love to have that nice big Twyfords washbasin No. 2642 with plenty of space on which to put things down. That merchant chappie told me that we must have what they call a close-coupled W.C. Suite because all the Joneses have them nowadays. ('Who wants to see a flush-pipe?' he said). The best are those quiet syphonic patents of Twyfords' Unitas-Silent No. 2757 or "Vortic" No. 2754.

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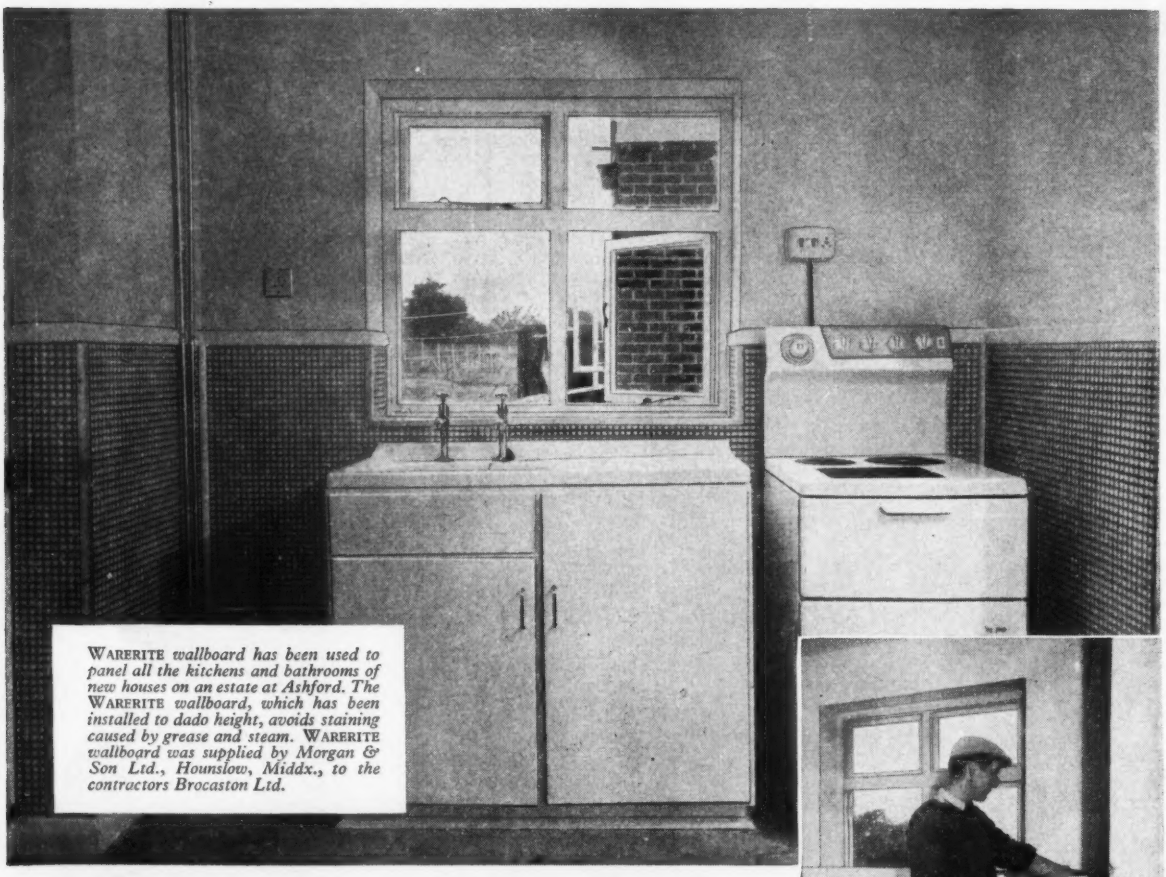

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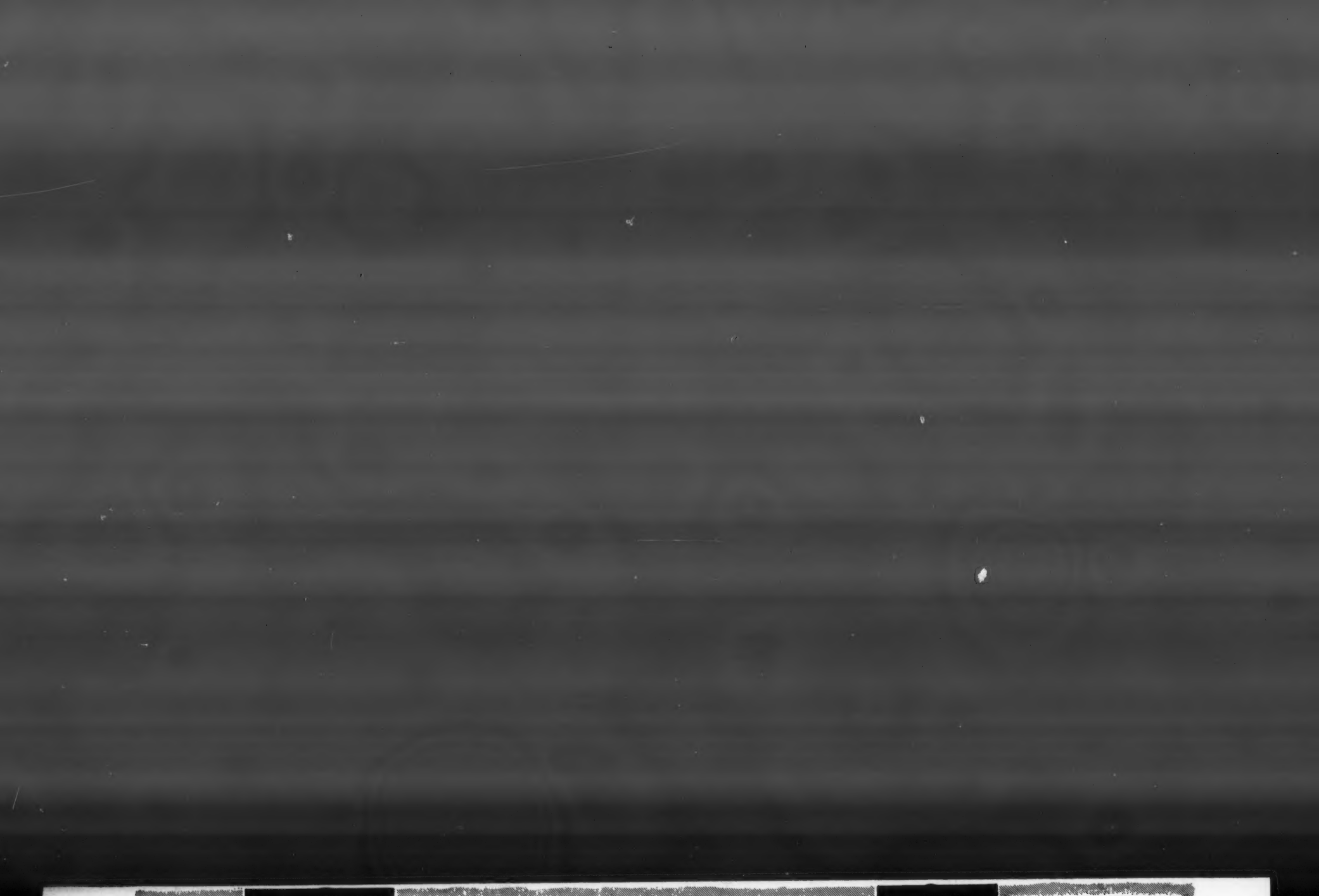
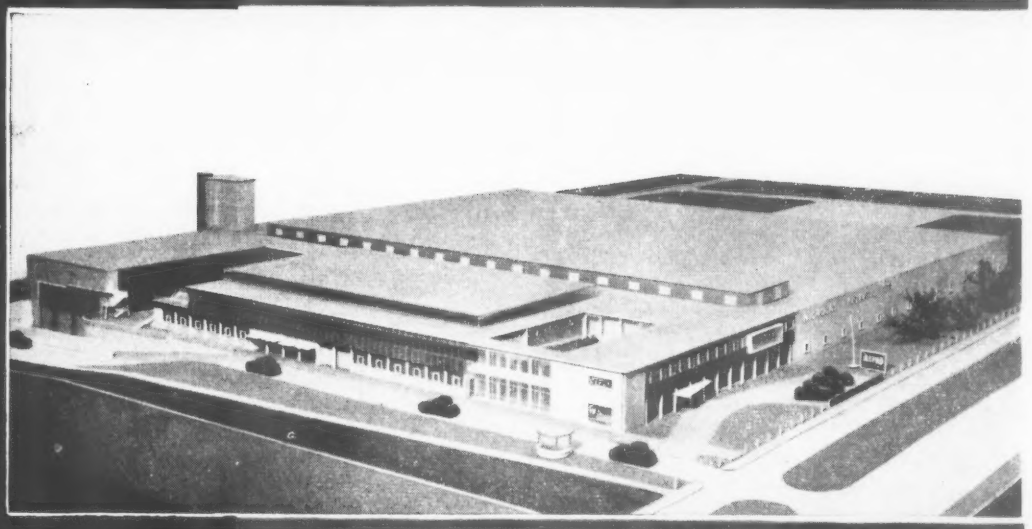
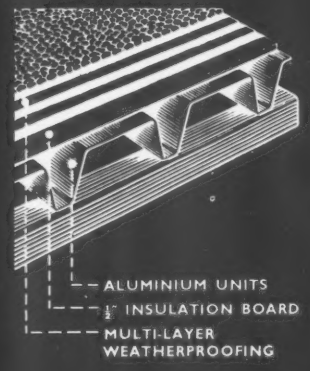


No headaches for 'ASPRO' with BITUMETAL on top





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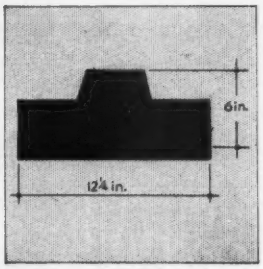

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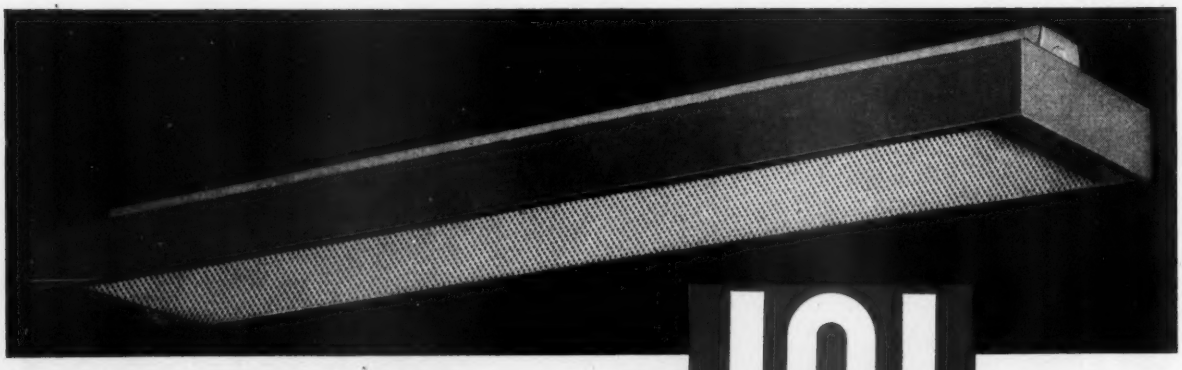

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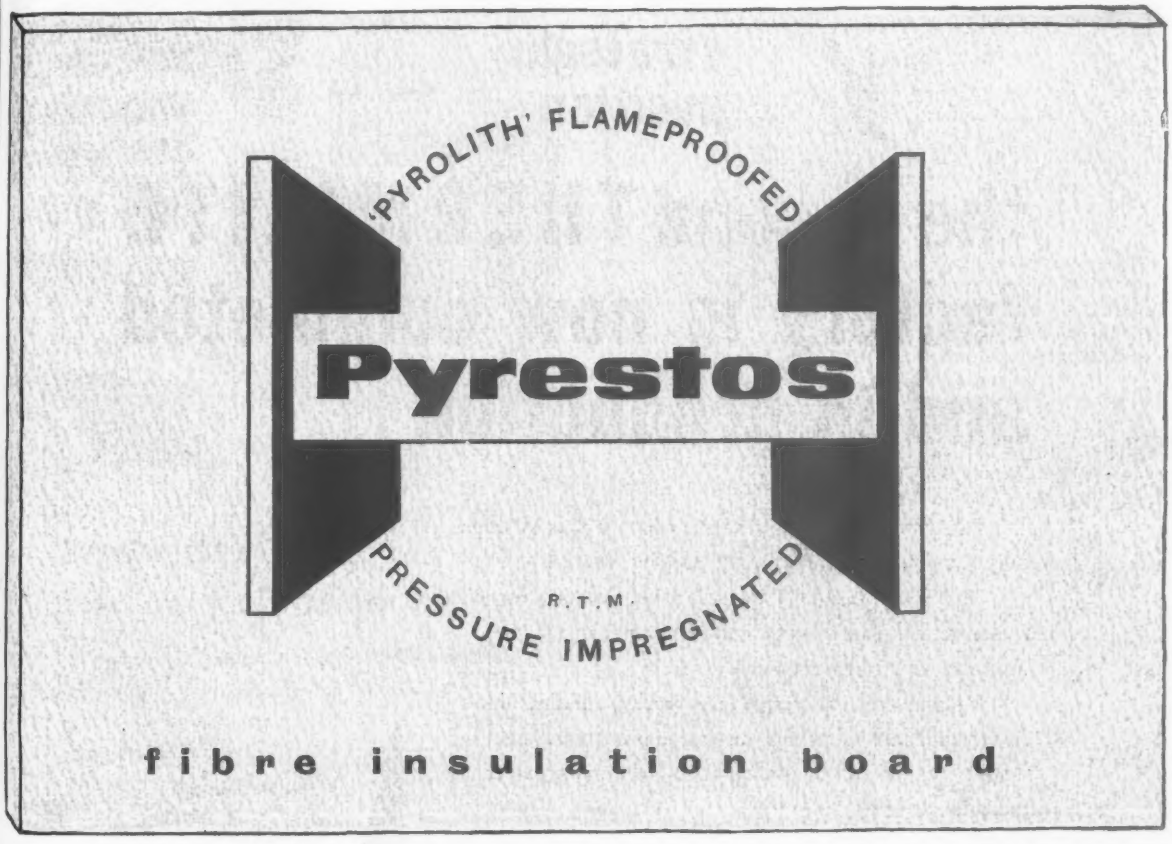

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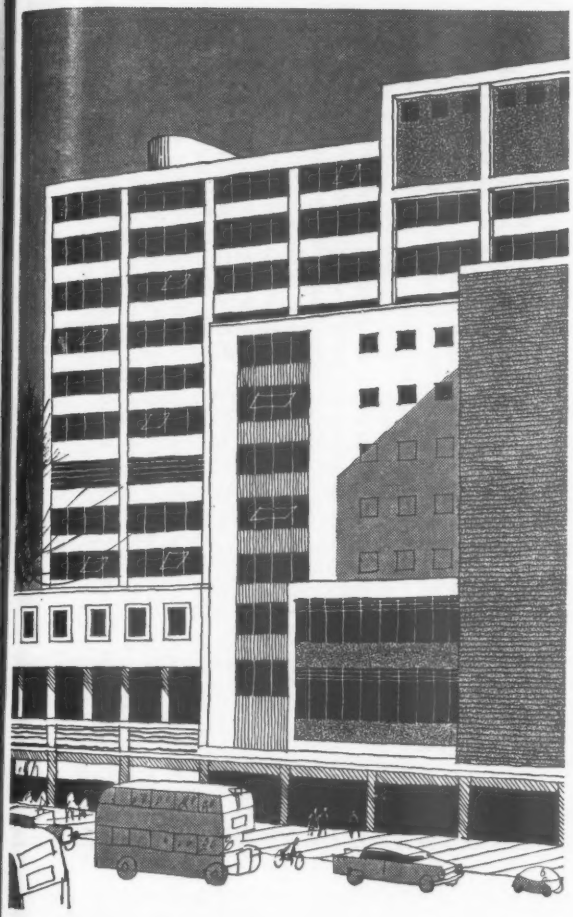

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THE ARCHITECTS' JOURNAL

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NOT QUITE ARCHITECTURE

THE INFIDELITY OF HI-FI

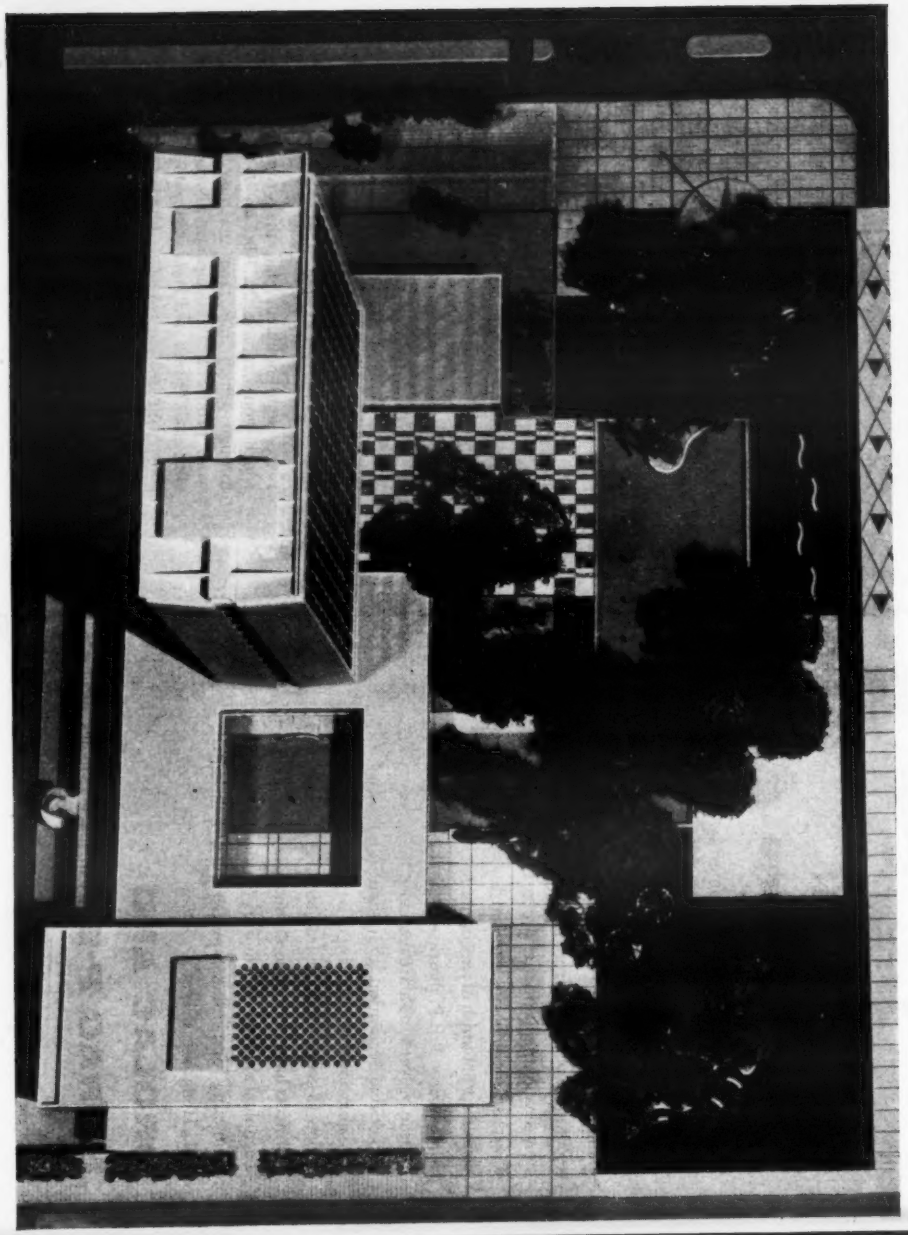
If you go shopping at, say, Gamages and take home a humble little two-knobbed radio you can be pretty sure on plugging in that it will work first time and give no serious trouble until after the Sovereign's children have grown up. In a year or two, its dogged, dim-glowing insides, if you get your head down behind, treat you to a cosy smell of amplifier, warm flex and scorching fluff lying thick, so that already you are a little stirred, already the tale is under way. It is a domestic epic. Sad the day a faithful old valve pegs out. You replace, however, for a few shillings, and herald back the bad old, stunned, flat-bottomed reproduction. And why not? If by now your ear is inured to it and your purse disinclined to know better, why not stay as you are, pleased with your bargain and building up the epic? All right. But have you ever had a brave new day suddenly break all around you in the middle of a quiet afternoon?

*

I went to Libels. It was true what people said. Hi-Fi had arrived. There were roods of showroom carpet to accommodate the full range, and to accommodate me a cosy and discreet little alcove tucked away, where matters would be finally clinched in the sort of lowered voices just permissible between hymns, with upholstery for my posterior, mahogany for my elbows and blotting-paper for my cheque.

*

I was soon nobbled. Had they something which would receive the BBC on VHF and through which my tape machine would work better? I stressed price. There was a click and *Tristan and Isolde* sounded out in deep, convincing, plangent tones through tuner, amplifier and speaker totalling £80 plus, about the price forewarned. I pretended to think about it. I wasn't going any higher. In vain did *Tristan and Isolde* suddenly take to leaping disconcertingly at the



Redeeming a City

Nearly four years ago the then newly appointed city architect of Plymouth, H. J. W. Stirling, made public his first tentative proposals for making a worthwhile city centre at the heart of the rigidly axial grid in which the Paton-Watson—Abercrombie plan had congealed. Last year we illustrated the latest stage in Mr. Stirling's proposals: an informal arrangement of law courts, council chamber and administrative offices on either side of Armada Way, the main north-south axis which runs through the city up to the Hoe. Mr. Stirling envisaged a group of buildings, that by their interesting silhouette and informal arrangement on plan, would provide a stimulating contrast with the pseudo-classical outlines of the new shopping centre. This design was accepted in principle by the city corporation and G. A. Jellicoe and Partners were commissioned to study and finish the sketch designs which had been prepared for the Council House, the Administrative offices and the Great Square. This, the final stage in the design process, is shown here, left and above. The general arrangement has been little changed, and the design of the buildings only altered in detail. It is possible that the fourteen-storey office block, for all the manner in which it is poised on its frame above the adjoining buildings, is not high enough (it has to prop up the down-hill side of an axis which runs *across*, as well as down, a slope) but it will be high enough to provide a superb view over the estuary. The biggest changes have been made, as might be expected of such an expert landscapist, in the treatment of the square. With a great variety of floor surfaces, paving, grass and water and by a careful penetration of one into the other, what promises to be a most exciting city square has been evolved.

flick of the salesman's commutator, all over the showroom, from one costlier speaker to another. He hadn't a hope. I was shaky enough when led to the alcove. My cheque left me like a frightened bird.

*

Next day Libels ring up. Sorry but they want another 57s. 9d. for the amplifier, please would that be all right? I submit, with tolerable ill-grace, and ask will they please stick to their delivery date? They do. In come the mechanics in smart white overalls, cardboard boxes under their arms and their vehicle radio whirring in the street as someone calls up head office. This is fine. They open the boxes. It is like Christmas. A lid is raised and I see fat, shiny, heavily sheathed, black leads buried in the packing like a crush of serpents. When finally the New Brutalist amplifier and tuner (ordered minus cabinets) are assembled, together with the big speaker on four legs, and what with the confusion of those so-many leads, it does not look at all the sort of thing to let the landlady catch me running off the free light.

*

What are they fiddling with? Why won't they hurry up? But my excitement when at last the great switch is thrown turns to dumbfoundment. If the telephone rang beside my ear I wouldn't hear it for enormous boatloads of sliced, Hi-Fi tomatoes being tipped assiduously into an enormous reservoir of hot, Hi-Fi fat. The din is incessant, and varied now and then by a terrifying, Hi-Fi humming-bird in full flight. He really is something, this humming-bird, worse than the atomic bomb, larger than the town hall. "You got a power station here?" A factory, I think. "You need an outdoor aerial"

*

Up, for another, rankling £6-odd, went the outdoor aerial and away went the tomatoes and the humming-bird, leaving the Home, the Light, the Third, the Metropolitan Police and hum, not humming-bird hum but low, tiresome, ineradicable, 50-cycle hum. It baffled Libels. Over several months a steady trickle of engineers investigated, trotting out so much contradictory diagnosis that in the end it became necessary for a very strong letter. The equipment went back to the manufacturers.

*

Now I have it back and it works but I shall never be completely satisfied. It is so sensitive, almost too sensitive, seeming to require a full-time operator as a cinema soundhead does. And already it is as obsolete as any Hi-Fi installed yesterday; worth second-hand only about half price. If I had my time again, and the money, I would keep well away. It is too early yet. One refinement, improvement or, indeed, conception supersedes another in a field rife in competition. Technology needs to settle down a bit. The grip is strong, however, and one day Hi-Fi will be something for architects' specifications. But not for me. The money saved would keep me in concert tickets for the rest of that new life.

ROBIN MUDIE.

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The Editors

MISPLACED PRIORITIES

WE fully share the misgivings expressed elsewhere in this issue by the experts whose views we have sought on the new Town and Country Planning Bill. The question that has to be faced is this: can effective, positive planning be achieved if its financial basis is destroyed, and the interests of the individual property owner are given more weight than those of the public? It is the provision of public services of all kinds by the public authorities, coupled with the granting of permission to develop or the zoning of land for specific uses, that determines the " market value " of land. It is not only inequitable, but a formidable barrier in the way of planning, if the new values created by public enterprise and planning decisions are to be appropriated by private individuals, while the public authorities remain responsible for carrying the loss on all the unremunerative services.

Payment of compensation at " market value " cannot fail to increase the cost of planning substantially, at a time when government financial policy (including the substitution of a block grant for the percentage town planning grants) seriously reduces the willingness or ability of local authorities to spend money on planning.

The Government seems to us to have got its priorities completely wrong. It is placing the main emphasis on individual house ownership, for which purpose it is to subsidise the Building Societies to take risks that the private lender will not take. Small wage-earners are to be encouraged by 95 per cent mortgages and insurances to buy obsolescent, pre-1919 houses. It is reported that hundreds of millions of pounds are to be invested in this project, which seems likely to inflate still higher the prices of old houses (thus adding still more to the cost of compensation at " market value "), and inducing people of small means to buy houses they can ill afford to keep in repair.

Yet the pressing tasks of urban renewal, of planning and reshaping our towns and cities to fit them for present day requirements are being starved of capital and encouragement. A flood of new speculatively built houses (and of cars bought on the never-never) is to pour around, and into, our towns at the very moment when the means of controlling them are to be undermined. Planning departments, already excessively occupied with negative forms of control (such as the

arbitrary aesthetic control of which so many architects complain and which the Bill does nothing to remedy) are to waste the time and talents of their staff on imaginary applications, solely for the purpose of assessing " market value " in relation to the Development Plans.

We do not dispute that difficulties arose in working the financial provisions of the 1947 Act, or that there are injustices and grievances in the present law of compensation. But to sweep away the financial basis for planning without putting anything in its place endangers planning itself. The Bill should, in our view, be withdrawn until a new Uthwatt Committee has considered the problem afresh. The Ministry of Housing and Local Government should immediately resuscitate the Research Department which it so foolishly disbanded, and without which it cannot possibly have the technical information and advice it requires. If it persists with the Bill in the face of the manifold objections to it, then the least it can do to minimise its effects is to relieve local authorities of the entire cost of paying the additional compensation, and their staffs of all responsibility for helping to assess it.

BUCKS DOES IT AGAIN

Bucks county architect is in the news again. (At one time we read and wrote of nothing but Herts, but now it's always Notts and Bucks.) This architect, whose clients always get their money's worth and his staff their due, has just held a course on productivity and building techniques in the pleasantly-landscaped Gothic environment of the county's adult education college at Great Missenden. The Bucks staff who attended this course, which was organized with the help of the County Works Committee, heard talks by such well-known speakers as William Allen and Anthony Pott, met clients and experts over very good food and attended an excellent party.

*

Other counties please copy. Incidentally, what *are* other counties doing? We've often had interesting reports from Kent, Shropshire, Derbyshire and Essex—and Lancashire and West Riding were once well in the running: but what about Surrey, Hampshire, Dorset, Devon, Somerset? Or, to go north, what about Northumberland, Cumberland, Durham and Staffordshire? Why don't we ever hear stories of development work or first-rate design from any of these counties?

THE NATIONAL GALLERY EXTENSION

What sort of building shall we have as the visual closure to the north west of Trafalgar Square when the National Gallery gets around to its extension? Now that the government have reserved the plot for this purpose there are all sorts of headaches to be acquired and cured. The architect will be much more than one degree under by the time he has fought—*if* he is the fighting kind—against all the pressure groups that will try to stop anything modern going up. The classical fanatics will have a good argument, for the site adjoins vaguely classical architecture on the west side and faces classical architecture across Pall Mall East. Furthermore, the kind of art gallery favoured nowadays, with practically no openings at all on its side walls, does little to control the look of the façades—and practically any kind of screen wall *could* be applied. May we hope the Fine Art Commission will be consulted early and that they will give a strong positive lead.

*

Will the Gallery decide it needs storage space here, to free existing galleries for exhibition? Will it choose better designed galleries and offices? Will the Chantrey white elephants be unloaded? Will any attempt be made to exhibit all the nation's Turners together and thus honour the terms of the Turner bequest? A lot of pressure will be coming from many directions. I don't envy the architect.

GOOD TYPES AT THE RIBA

Three warm cheers! For whom? You'd never guess: for the RIBA. One cheer is for the new posters, designed (on the new B.S. paper size) by Herbert Spencer, the editor of *Typographica.* Another cheer is for the announcement that Mr. Spencer is also to redress the annual report and all other RIBA literature. And a third is for the plea printed in the current *RIBA Journal* for some decent technical films. " Are there no firms," asks the *Journal*, " with sufficient self-respect to throw overboard the tired, outworn, fallacious old advertising gimmicks, and let us have instead sound, well-conceived informative films which will help us to keep our technical knowledge up to date? " I can only repeat that question hopefully, and remind you—as the *RIBA Journal* does—that the sort of thing that is wanted is done very well by the BRS.

HOMELESS GIRAFFE WANTED

If you haven't seen the Modular Society's giraffe kennel at 29, Albert Embankment you should go and look at it within the next month, after which it may be pulled down. This building really ought to be preserved. It is not beautiful, of course, and you have to know quite a bit about building technology to know why it is so interesting. But is it not a basic archi-

tectural document? And ought posterity not to have the chance of seeing the shocking joints that we had to accept while the building industry was going through its belated palaeotechnic age?

*

Will some enlightened local authority give this building a site? After all, it *is* a shelter.

ARCHITECTURE AND OGLING

Professor R. Gardner Medwin, of the Liverpool School of Architecture, who is chairman of the Bluecoat Society's organizing committee, has told me of an excellent "celebration of the arts" which was held recently by the society in Liverpool. The subject of the celebration was the Augustan Age. The whole thing lasted for a fortnight and included lectures and exhibitions on the arts, as well as concerts and an "entertainment with singing, laughing, ogling and all that." Apparently the architectural talks, which included one by Sir John Summerson, produced encouragingly good audiences.

*

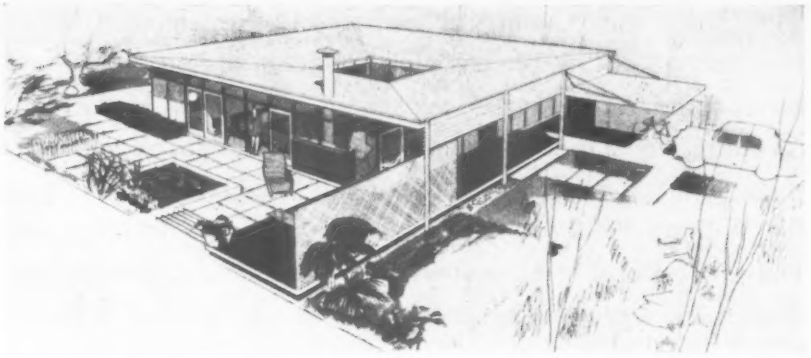
Reports of this celebration are so good that I shall try not to miss next year's coverage by the society of "the turn of the century," and the following year's celebration of the age we live in.

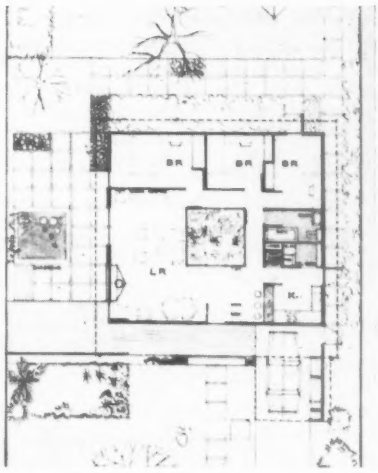
LIGHT MOVED TO BUSHEL

It seems that the more design-conscious you are, the less chance you have of being housed in an attractive building. The Council of Industrial Design have to live down as well as in Haymarket House, Condé Nast are in the far-from-glossy shell of Vogue House, in Hanover Square, and now it is Olivetti's turn to suffer. Their showroom, which once made such a pleasant change from the dull pomp of the car showrooms on the eastern side of Berkeley Square, is now concealed in a stylistically unsuitable building at the north end.

*

But inside all is elegant and—it appears—workable. A neat suite of offices has been designed by Misha Black and John Diamond in a spare, square, faintly-Italianate manner. Olivetti should certainly be happy here, but I hope they will soon find themselves a new public showcase in a conspicuous position and cheer up the streetscape again.





The winning plan in an Australian Family Home Competition, which won £2,000 for K. F. Woolley and M. J. Dysart. It was chosen by the assessors, Wm. R. Laurie, Past President of the RAIA, Associate Professor J. M. Freeland, Associate Professor of Architecture, N.S.W. University of Technology, and Rudolph Simmat, Managing Director of Taubmans Industries Limited. Will the assessors in the RIBA Ideal Home *competition prove equally adventurous?*

AMERICAN CRITIC

Architects who are sensitive to criticism should take a look at last month's *Forum* in which Richard A. Miller criticizes an insurance building at Omaha ("Temple on a Hilltop—Almost") in the most scathing terms. Mr. Miller says that although the four sections of the building seem to be based on sound functionalist doctrine, the four sections actually join each other in a confusion which is the antithesis of articulation. He accuses the architect of allowing a desire for showmanship to get him into fantastic architectural difficulties, and he has a good deal more to say to the same effect.

*

The same issue of *Forum* will dispel the idea that industrial architecture in America is inhuman. One of four "factories planned for people" is an "industrial park" by O'Neil (slab-lifter) Ford and Richard S. Colley and features imaginative landscaping of a dull site.

COFFEE, FLAGS, ETC.

To end, here is a brisk summing-up of one or two items that have been crowded out of earlier notes for reasons, as they say, of space.

*

If you are tired of the garishness of the normal coffee bar, try the "Partisan," in Carlisle Street, designed by architect Douglas Stephen, who was asked to provide an "anti-espresso bar." An unusual feature of the place is that the owners don't want you to rush through your coffee and leave early. They want you to stay and argue. They are, in fact, the Universities and Left Review Club.

*

Who is supposed to be impressed by Bovis's painted flags on each floor of the Thorn Electrical Industries building in Monmouth Street? Each flag represents about a week's work. This should startle the general public. But what will the g.p. think is happening during the winter days ahead, while floor laying, plumbing and other finishing is going along? Has Bovis any answer to this difficulty? I hope to report on this in due course.

ASTRAGAL

* Penguin Books 8s. 6d.

The Town and Country Planning Bill, which reintroduces " market value " as the basis for compensation on the compulsory acquisition of land, is clearly of exceptional importance. At our request a number of experts in this field have contributed their personal views on studying the Bill. They are Professor Sir William Holford; Arthur Ling, the City Architect and Planning Officer of Coventry; Paul Brenikov, lecturer in Civic Design, Liverpool University; D. A. J. Searle, A.R.I.C.S., lecturer in valuation at the London College of Estate Management; and Ruth Glass of the Town Planning Department, University College, London.

THE TOWN AND COUNTRY PLANNING BILL

Effects on Planning of Compensation at 'Market Value'

SIR WILLIAM HOLFORD:

'Plunged in a Sea of Doubts'

The risk of incurring compensation has always been a brake—and some would say a necessary brake—on planning; and it was only during the Second World War that an attempt was made to take the brake off.

The 1947 Act set out to peg the value of land to its existing use. What resulted was a fairly elaborate form of contest between those holding land and those seeking to acquire it. The rules were observed but there was a marked decrease of interest in the game itself. Outside the official ring, land was changing hands at market prices. The outcome was inevitable. Most people concerned with planning and urban redevelopment regretted that the 1947 rules could not be made to work, but it was clear that they could not.

In 1954 the Government abandoned the system of Development Charges. The countrywide valuation of development rights which had yielded much information, and some experience, was then mainly of use in fixing the 1947 development value which, when added to the current use value, determined the price to be paid on compulsory acquisition. So far as private transactions in land were concerned, it had become an historic administrative exercise.

Meanwhile, another exercise has been going on—the universal preparation of Development Plans under the 1947 Act. These, together with the planning permissions granted or refused during the last 10 years or so, are to become the basis of the " New Rules " embodied in the Town and Country Planning Bill just published. Public authorities will now pay market value compensation for land compulsorily acquired. In that sense the Bill puts the clock back to 1919, but in the interval some of the figures on the face of the clock have been altered!

The Explanatory Memorandum (Cmd. 562), published with the Bill, is a really admirable exposition of an intricate subject. It is also as frank as an Explanatory Memorandum can be; and its very frankness plunges the reader into a sea of doubts. Are the registers of planning decisions, coupled with the provisions of Development Plans which are subject to revision every five years, any more equitable as a basis for compensation than the rules of 1947?

Granted that there will be less hardship to owners generally, how consistent can the Minister and the planning authorities be in determining " the development for which planning permission might reasonably be expected to be granted "? Most doubtful of all: will planning authorities themselves be able to safeguard their longer-term proposals in the face of the compensation now payable and of the rights of owner-occupiers to demand immediate purchase of their property, if it is adversely affected by the scheme?

The Bill implements many of the recommendations of the Franks Committee (on Administrative Tribunals and Enquiries). This, again, is good news to owners and objectors. On the other hand, the results of this improved procedure might very well be an increase in the number of enquiries, a lengthening of processes already long, and a return to the practice of making a development plan a mere formalization of existing conditions. It will be no justification to say that the really able planners will take these amended provisions in their stride. Councils and committees, lined up before another row of hurdles, may not clear them quite so easily.

It seems to be an open question whether the New Rules will arrest or increase the unplanned congestion that is making our cities less inhabitable.

ARTHUR LING:

'Dismantling 1947 Financial Provisions'

It takes time to understand the full implications of the Town and Country Planning Bill now presented to Parliament but my first reaction is that it is a logical consequence of the 1954 Act which began the dismantling of the financial provisions of the 1947 Act. Personally, I regret that the brave attempt to solve the problem of compensation and betterment in the 1947 Act was not given a chance. If the £300 million compensation had been paid out everyone would, at least theoretically, now be selling land or public authorities would be acquiring it at existing use value.

Whereas the 1954 Act changed existing use value to current market value for voluntary sales of land it retained the existing use value plus 8/7ths of the admitted claim under the 1947 Act for compulsory purchases and this obviously has put some owners of land at a disadvantage. It has been said that in some cases where the development consists of outworn housing ripe for development as housing that the Local Authority wishing to acquire it will benefit financially from a change to current market values, but I think this is debatable. What is certain is that authorities reconstructing the commercial centres of cities will be faced with higher prices when they acquire land. In the case of comprehensive development areas, because they have in the past not been able to acquire land in advance of immediate requirements, they have had to pay the owners of land enhanced values which they themselves have created by their own redevelopment of adjoining sites.

Clause 33 of the Bill which extends the powers of local authorities to buy land compulsorily for purposes of town development, looking beyond immediate requirements to a period of 10 years, will " in some measure " enable them to avoid paying for these values created by their own expenditure and this change is to be welcomed. It is not clear, however, the extent to which the additional expenditure involved on the part of the local authority will be met by Government grants.

The Bill gives an estimate of £150,000 per annum initially and says that Exchequer assistance to local authorities will be given mainly through the operation of the general grant and rate deficiency or equalization grants system in the Local Government Act 1958. If these grants are sufficient to enable the authority to buy the land it requires for the next 10 years of its activities without additional annual expenditure then this is a welcome step forward.

It is obvious that the Government does not envisage at the present time attempting to solve the problem of compensation and betterment. In these circumstances the nearest approach that can be made to a solution is for the local authority to acquire comprehensively those parts of towns and cities which require comprehensive redevelopment, allowing private development

to take place on a leasehold basis. The same approach could be taken for the development of new areas as this would ensure the same measure of comprehensive design and maintenance as was achieved when land was in large-scale private ownership.

PAUL BRENIKOV:

'Very Serious Problems'

The main object of the New Town and Country Planning Bill, a return to "market value" as the basis for compensation for lands compulsorily acquired for public uses, seems on the face of it to be reasonable and fair. Many local authorities support this idea. For even though difficult eases represent only a tiny fraction of all their dealings in land, the few that do occur can become so explosive that sometimes they have been reduced to all kinds of shifts in order to avoid causing hardship to owners and bringing odium upon themselves. Few of those who dealt with the law as it stood would dispute that some change was necessary, even overdue.

Unfortunately the issue is by no means so simple and clear cut. Even a first reading of the new proposals reveals that they raise quite as many problems as they solve. Some of these problems could become very serious.

For instance, the calculation of a market value for any given piece of land today is directly affected by the planning restrictions placed upon it. Thus the local authorities who are themselves responsible for preparing the plans will influence, and to a large extent, the price they may have to pay if they need to acquire. It is easy to see the very adverse effect that this could have in planning comprehensive and long-term schemes.

The difficulty will be aggravated by the fact that the more efficient and effective the plan is the greater the chance that the general level of land values will rise throughout the whole area. The impact of this extra cost on central area redevelopment and on other schemes involving acquisition such as new towns or town development schemes, could be very considerable, even crippling.

It is to be hoped that some of these fears may not be justified, but the Bill as it stands does not seem to afford anything like sufficient safeguards against this kind of danger. The danger is very real, for the principal reason for our failure to do any effective planning between the wars was because of its excessive cost. The same thing could happen again all too easily. Already planning will have to fight hard to secure its share of the finance available under the new system of block grants to local authorities; this Bill makes it certain that in future they will have to ask for even more.

The need to reclaim and redevelop the decayed out-of-date central areas of our towns, demolish and rebuild the slums, redistribute and rehouse badly sited industries and provide for a decent road system to carry the traffic becomes more and more pressing as time goes on. It is Government policy to do all these things. But at the same time it must be recognized that this simply cannot be done without some increase, perhaps a considerable increase, in public ownership.

If it is also Government policy to make acquisition more expensive—which may be necessary in order to be fair even to a minority of private owners—then at least we should have firm assurances that the extra costs will be met. Unless this is done it seems inevitable that renewal and redevelopment will be delayed—perhaps even shelved altogether.

From every point of view this retreat from planning would be a major disaster not only for planning itself but for the nation as a whole.

D. A. J. SEARLE:

'Increased Financial Burdens'

It is difficult to believe that this Bill will be the final word on town planning and compensation legislation. Rather it is an instalment and leaves the impression of many more instalments yet to come. It makes no real attempt to rationalize existing legislation and whilst meeting certain objections to present bases of compensation creates further anomalies which are themselves anomalous with the unrepealed provisions of the 1954 Act.

The consequential increased financial burden (estimated by the drafters of the Bill at 25 per cent. on present costs of buying) is thrown upon public authorities at a time when their functions are being seriously atrophied by the block grant system. It is essential to remember in this connection that these public authorities are instrumental in the redevelopment of land for those purposes which are unattractive to private capital or are essential to the health and economic well-being of the community. The new Bill is only understandable in the light of the 1954 Act and mainly remedies the very unfair provision of that Act as between the value of land for private development and for compulsory purchase. Criticism must therefore be levelled at both measures or not at all.

The greatest criticism is the adoption of zoning as the criterion of value. An amendment to the Development Plan can considerably depreciate or appreciate land values overnight through no fault or initiative on the part of the owner and will then be more fiercely contested than the original Development Plan.

The Bill together with the 1954 Act can only increase the difficulties attendant upon producing order out of the present chaos of land use in this country. The return to the principles of "set-off" as a method of recouping the increased value of an area due to Local Authority action is unlikely to be any more effective than it has been in the past except in the case of road schemes.

Provision is also made to enable residential owner occupiers to force Local Authorities to buy their properties in certain circumstances. These owners are at present unfairly penalized by the working of Development Plans and a remedy is long overdue. The solution provided is probably the fairest in the circumstances. It will, of course, strain still further the financial resources of local authorities and may tempt them not to define their proposals in the Development Plans. It leaves quite untouched the problem of similar owners in programmed areas.

One cannot help wondering if this measure, in removing the last vestige but one of the 1947 Act, will not leave the way open to more extreme legislation in the future. If so, it may prove to be rather shortsighted.

RUTH GLASS:

'The Anti-Planning Bill'

Part I of the new Town and Country Planning Bill has been misnamed. It should be called the "Anti-Planning Bill." It is not a mere sequel to the 1954 Act. On the contrary, that part of the new Bill, which provides that from now on compensation for compulsory acquisition of land will be paid at current market value, makes sense only as a preamble to further far-reaching statutory proposals. It presents a radical departure from the principle on which our planning system is based—that of nationalization of post-1947 development rights and values.

It is true that the application of this principle has become increasingly ambivalent, especially as a result of the 1954 Act. Nevertheless, since the 'forties, successive governments have all agreed that planning must fail if this principle is shelved. The new Bill abolishes it, and is thus liable to make the planning system unworkable. If Part I of the Bill is enacted, and not forthwith repealed, British planning institutions will inevitably have to be subjected to a legislative demolition squad.

This prognosis sounds gloomy, and perhaps also too generalized in relation to a Bill that deals with a rather narrow subject and is deceptively complicated. And yet its gist is simple. Some of the most cogent reasons for rejecting a Bill such as the present one were not long ago given by the Prime Minister himself. Indeed, it is well worth while to compare the White Paper on the present Bill with the White Paper of 1952 (that on "Amendment of Financial Provisions") which explained the 1954 Act.

While the 1954 Act altered the previous provisions for compensation and dismissed development charges, it did confirm that development rights and values were no

longer private property. The new Bill brings values back into private ownership in cases of compulsory acquisition. The 1952 White Paper, moreover, stressed the need to pay compensation for planning restrictions and for compulsory purchase on essentially the same basis. The new Bill leaves compensation for the former unaltered, but significantly changes that for the latter. The present proposal to pay for compulsory purchase at current market value (which includes potential value) was strongly opposed by the 1952 White Paper.

When Mr. Macmillan, as the Minister of Housing, introduced amendments to the 1947 Planning Act in the Commons during the debates of 1952 to 1954, it was the keynote of all his speeches that the Government were committed to the major conception of the 1947 Act. "There is no doubt whatever about that decision; nor do I think that there can be any dispute about it, for it is more necessary now than ever in our history that the limited acres of this small island should be used to the best national advantage." And Mr. Macmillan repeatedly explained the "overwhelming" reason for retaining the 1947 valuation as the basis for compensation: "If compensation had to be paid in future on values as they accrued, unknown and perhaps heavy claims would fall upon the community. Thus the broad principle of the 1947 settlement—no compensation for values which accrue after 1947—has been generally accepted as fair. If that were destroyed, new controversies would arise, and the revival of those controversies, I feel sure, would have been equally injurious to the long-term interests of landowners and those of the general public. When a settlement of this kind . . . has been reached, . . . I think it would be dangerous to overthrow the principle on which it is based."

It has now been overthrown, and we are not told why it is no longer dangerous to do so. In contrast to all the previous eloquence, the present White Paper is amazingly taciturn. It merely states that it is the object of the new Bill to take us back to the compensation basis of the relevant Act of 1919.

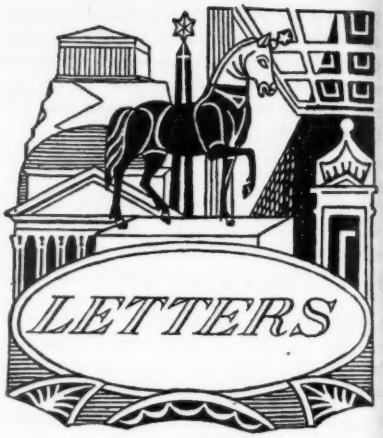
What has happened during the last four years that has made the concept of the 1947 Act obsolete and that of the 1919 Act up-to-date? Have the British Isles become larger? Has their population significantly diminished? Has scarcity of resources disappeared? Or has perhaps a machine for time travel been invented, which takes us safely back into an idealized past, and absolves us from responsibility for the future? The questions multiply when the Bill is studied closely, and there are no answers, not even in the sphere of non-science fiction. Last year, only 74 compulsory purchase orders, covering a total of 614 acres, were confirmed under the Planning Acts in England and Wales. All but one hundred of the acres involved were purchased under the New Towns and Town Development Acts. But a mere 8 per cent of all the land acquired by New Towns Corporations during 1957 was bought compulsorily. Can there then really be so much difficulty and hardship that it is necessary to introduce a Bill which is contrary to all post-war policy, and which is likely to upset the whole apple-cart of planning? So long as there is no explanation, one might well wonder whether the Bill is designed to solve a problem or to create problems.

It certainly complicates many matters—economic and administrative ones. It will create a spiral of land values and before long make public development prohibitive in cost. It invites pressures and counter-pressures in determining land-uses: soon it will be hard to decide whether land values are the hen or the egg of the development plan. The Bill provides that the previous owner retains a feudal interest for five years in the land he has sold under a compulsory order: he can claim additional compensation if it is put to more profitable use than was intended at the time of sale, though he need not return any money if the use is less profitable than was then thought. The local planning authority has to keep him informed of subsequent planning permissions. This means, of course, also that sale under "compulsion" will be of greater speculative value to the owner than sale by agreement: compulsory purchase orders will multiply.

While the 1954 Act introduced anomalies into the provisions for compensation, the 1958 Bill brings about a quadruple system. Mr. A, who is lucky enough to be "compelled" to sell can claim the current market value—a speculative value that includes future, still hypothetical increments, which are intended to be achieved by, and which should belong to, the community. Mr. B, who has a claim under the 1947 Act, and whose intentions to develop his property are frustrated by planning restrictions, can at most hope to get some compensation for retrospective loss. Mr. C, who thinks that he has a similar claim, will be told that he is included in the "exclusions"; he will get nothing. Mr. D. whose property belongs to the post-1947 generation of development, has no claim whatsoever if he is prevented by a planning decision from putting it to more profitable use. And these four gentlemen may live very close to one another: the physical boundaries of land-use zones are by no means hard and fast.

Will not Messrs. B, C and D be bound to feel aggrieved? Injustice will be seen to be done. Why should some be prepared to accept financial sacrifice, and indeed planning control at all, for the sake of the "public interest," while others can gain private, unearned profits at the public's expense? Such patent inequity makes nonsense of the concept of public interest. It deprives planning of its raison d'être—the just pursuit of the public interest.

We are asked to forget Barlow, Scott, Uthwatt, Silkin and Macmillan, and the experience and reasoning derived from over a hundred years of British history. Can all this be rejected out of hand, just because of unknown "confidential negotiations," of which the Press reports spoke? Perhaps we should revise all our thinking. Perhaps planning is no longer essential, and new legislation is needed. If so, there is surely a prior need for a new Uthwatt Committee to study and to present the evidence.



Basil Spence, P.R.I.B.A.

Roy T. Hawkins, A.R.I.B.A

Alan R. Ferguson, A.R.I.B.A.

Douglas Beaton and Kenneth King, A/A.R.I.B.A.

Robert C. Blair, A.R.I.B.A.

P. R. V. Hammond, A.R.I.B.A.

Colin Samuels,
Managing Director C.A.S. (Industrial Developments) Ltd.

Bill Richards, Registered Architect

K. Keppich

Alan Thompson, A.R.I.B.A.

Olive G. Deer,
Chairman, LCC Welfare Committee

The President Replies

SIR,—Has Astragal missed the point? Perhaps I have not made myself crystal clear. Of course I am whole-heartedly in favour of planning. In my view too much planning is being done by the lay Committee and too little by the trained expert.

BASIL SPENCE.

London.

Planning—Or Snobbery?

SIR,—One would have thought the answer to the question "Why should *this* house be considered unworthy of these?" (AJ, October 23, 1958, pp. 596-7) was obvious.

However reluctant one is to criticize Mr. Dry's design it must be seen that he breaks the most elementary rules of composition—as applicable to both traditional and contemporary architectural styles—and the detailing is quite crude.

The other houses illustrated, surely also architect designed are, in the main, well-composed and tastefully detailed in traditional and therefore tried and proven styles—not yet entirely obsolete on either functional or economic grounds.

Whilst applauding your stand against bureaucratic interference in matters of æsthetic control, if you *must* devote a full two-page spread to your argument, please ensure that the subject of the controversy if worthy of the attention you give it.

ROY T. HAWKINS.

London.

SIR,—It is a pity that the ARCHITECTS' JOURNAL (October 23) could not find a better example than the house on Epsom Downs for their indignant stand against unqualified planners and their "snobbish prejudice" against so-called contemporary design.

The æsthetic quality of the existing houses in the area, with the exception of one or two, is, to say the least, doubtful and this ought to make it rather easier for one to sympathize with the rejected scheme.

The design illustrated, however, leaves me feeling that it was achieved with two things in mind. One we are told was to "avoid extremes," the other, I suggest, was to be different at all costs. In so many contemporary designs the latter aim is only too apparent and is not always restrained by the former.

In this instance the combination has produced a building, which from the outset looks like a conversion and as only such might be acceptable. I am baffled, however, to find that it is upheld by the ARCHITECTS' JOURNAL as a "progressive" and "discreet" design whose rejection demands such publicity.

Could it be that the quality of the ammunition is considered of less importance than the fact of firing one more shot at the peculiar system whereby professionally unqualified persons can alter or reject an architect's design purely on æsthetic grounds?

ALAN R. FERGUSON.

Derby.

The Belgrade Theatre

SIR,—We were surprised to hear that Mr. Jay has not yet visited the Belgrade Theatre. For someone who is obviously so interested in theatre design generally and the Belgrade in particular, we feel sure it would be worth his while.

DOUGLAS BEATON,
KENNETH KING.

Coventry.

RIBA and *Ideal Home* Competition

SIR,—The headings and contents of the first four letters in your issue appear to be closely related, and to substantiate the alarm being felt in many smaller practices, especially in the provincial areas.

First, we have the large developer with their staff architects obtaining work, much of which might otherwise find its way to architects in private practice, by a legal, though unfair, form of advertisement.

Now we have the prospect of the RIBA in its capacity as a "Learned Society" entering into an agreement, with a commercial concern, under the guise of "demonstrating to the public the advantage of architect designed houses," to condone, even promote, the commercial advertisement of a selected few to the detriment of the many.

It is open to considerable doubt, no matter what the voting was on the Council, whether the decision of the RIBA to assist actively in this commercial undertaking carries the support of the many members who practise their profession in private offices up and down the country, who never expect to be national names or to be elected, or co-opted, on to the Council, but who are generally respected in their own districts as competent and honest practitioners.

Mr. Dennis Berry has clearly stated a case, which I wish to reinforce, for the withdrawal by the RIBA of their support to the competition, a step which would be received with respect, and relief, by a considerable body of members holding similar views.

ROBERT C. BLAIR.

Liverpool.

SIR,—In connection with the RIBA and *Ideal Home* competition and in reference to your article in the JOURNAL for October 30, in "Green Light for Men with Ideas"; it is apparent that the RIBA are expending serious effort to make the competition a success both for the architect and the home owner.

You mention the possibility of backing from the building societies and the interest of the MOHLG. This background combined with the support of the popular press could do much to break the back of the badly designed house and indifferent suburban development prevalent throughout the country.

However, the success of the competition may be considerably impaired by the widely divergent application of bylaw and town planning controls which exists between the many authorities throughout the country. These anomalies are particularly applicable to domestic building and have been encountered by the majority of architects.

In view of the national scale of the competition it would seem an appropriate time for the RIBA with the MOHLG to negotiate with all local authorities to achieve a more uniform application of these controls.

P. R. V. HAMMOND.

Solihull.

The Supplanting Developer

SIR,—Could you spare me space to answer Mr. Peter G. Elphick's letter? (AJ, October 23.) Isn't the answer to the problem given by the RIBA—"The sub-committee see the problem as a simple case of direct competition to be frankly faced"?

When our group carry through a development, the total fees of our consultants plus our own fees must exceed those of the architect and conventional consultants—especially when some consultants, in spite of Codes of Practice, do not always charge scale fees.

Then why does the industrial client come to us? Perhaps because—

(1) We have a wealth of industrial experience behind us which we suggest can only be paralleled by the architect specializing in the industrial field.

(2) Our methods of operation and contracts are totally different from the traditional methods. We eliminate provisional sums and prime cost items, we do our thinking before we start building. We therefore give a faster job and at a lump sum price. We relieve the client of the nagging worry of never knowing where he stands financially.

(3) We bring commercial control into the construction side of the job which, despite its tightness, is welcomed by the main contractor, the sub-contractors and also the consultants—because everybody knows precisely where they are.

(4) At the bottom of the list I bring in the financial aspect. We finance the whole operation and let the completed building at a truly economic rental. The client can conserve his capital for much more profitable investment than in bricks and mortar.

The above are facts. But one imponderable thing we provide (and which may be more important than all the foregoing) is the vision and the imagination of the experienced industrialist—a factor which can only be gained by many years of experience in running as well as designing factories.

May I now turn to the attack? We have resolutely set our face against the direct employment of architects and other consultants; we always employ independent firms, none of which could by any stretch of the imagination be called "tame"; each have large separate practices and could certainly operate independently of our business.

May I carry the attack even into the RIBA itself? Why on earth put all these restrictions on professional members? When an architect has done a good job, why not find some method by which he can acclaim the fact to the world? Why not allow him a modicum of discreet advertising in defined channels?

It is foolish to talk about the industrial developer's method of operation as "this iniquitous practice." There can be nothing iniquitous in a process which produces capital goods more cheaply, better, and more quickly than by conventional methods especially if at the same time it maintains—I would even go so far as to say, improves on—all that architecture stands for in the shape of good taste and good design.

If we come down to base rock, does not the real answer lie with the RIBA itself in so arranging its house that it can meet this so-called competition from "the supplanting developer?"

COLIN A. SAMUELS

London.

Futile Fumbling?

SIR,—I am the one and only architect referred to in Mr. G. G. Turner's letter (AJ, October 30) and I must tell him again that in fact the British Paper Mill owners have now adopted the revised range after consultation with the RIBA and catalogues received from several firms are to these sizes.

My sympathies go out to Mr. Turner's organization which no doubt has just completed a reprint and I can assure him that his catalogues will be welcome in my office, but I hold no brief for the fumbling and futile comments of your Technical Editor whose puerile remarks on my intransigence fill me with dismay. This is no way to dragoon the less-enlightened manufacturers; and I specifically except Woods of Colchester, Tretol and the others who try very hard to keep up to date in producing their catalogues in our sizes.

BILL RICHARDS.

Liverpool.

The Technical Editor writes: I cannot understand our contributor. He first rejects Messrs. Woods' literature because, in conforming to the sizes originally stipulated in BS 1311, it does not conform to the "A" series. Now, in one and the same letter, he announces that the literature of Messrs. Woods is not only acceptable but welcome to him (which means, presumably, that he has fished it out of the wastepaper basket); but goes on to stigmatize as "fumbling," "futile" and "puerile" our view that architects should for the time being accept material conforming to either standard. Out of his fumbling confusion, however, good has come; and we are grateful to him for the news (mediated through Anthony Williams at the RIBA) that the main papermakers have agreed to provide papers to "A" series sizes.

The Cause Of Streaking

SIR,—Messrs. Eastwick-Field and Stillman remark in their article "Flats in Berlin, 1958": ". . . rendered buildings are common, and although they darken with age they appear to weather evenly and not to suffer so much from the streaking which is so familiar to us in our large cities. We can only suppose that much of the trouble here is caused by an excess of soot rather than excess of rain."

The real reason for the even weathering and less streaking in Berlin's rendered buildings, is the general use of "weatherings" over all horizontal areas. The weatherings are provided with an adequate

drip and designed to throw the rainwater clear off the wall.

This detail is of the greatest importance for the appearance of the rendered façade and if it were adopted for general use in this country, there is no earthly reason why the façades—though they naturally will darken with age—should not be free from the blemish of "streakings."

K. KEPPICH.

Cheddar.

Architects' Liability

SIR,—In their recent effusion of modesty the Council of the ARCUK has agreed reluctantly to what looks like a system of tax evasion whilst making great play with the unchanged traditional unlimited liability of the architects to actions alleging negligence. Meanwhile their other hand offers an insurance policy protecting architects from this very liability.

Architects cannot remain in this curious attitude of apparent legal exposure, but must be protected either by company law (not perhaps in the client's interest) or by an openly conducted system of insurance operated by the Institute.

Automatic cover to Fellows (they are by definition, principals and therefore need it) at some slight increase in annual subscription, and cover by arrangement on individual commissions for Associates would place architects in a similar relationship to their clients as motorists, *i.e.*, protected from any ill result of their actions by compulsory third party insurance.

Associates could then be made not normally liable to actions for negligence, by some form of limiting association, and would not be expected to offer the full service, with its associated liabilities, which a client normally expects, until such time as in fact they are able to do so. The membership gradings within the Institute would become meaningful, and the anomaly of a newly qualified Associate being expected to possess the technical ability of a man of many years' experience, overcome.

ALAN THOMPSON.

London.

Handicapped

SIR,—ASTRAGAL's mention (AJ, October 16) of the workshop for the handicapped recently opened by the Council in Holmes Road, St. Pancras, was very gratifying. The suggestion, however, that there was scepticism of the proposal from the Ministry of Labour is misleading. In fact the greatest help and co-operation were received from the Ministry in planning the project. The Ministry are paying a grant of £15,000 towards the capital cost, an annual contribution based on the number of workers and also allowances to trainees.

OLIVE G. DEER.

London.

DIARY

Hawkemoor's Projects for Greenwich Hospital. Talk by Kerry Downes, Librarian of the Barber Institute, Birmingham. RIBA Library Group Meeting at 66 Portland Place, W.1. 6 p.m.

NOVEMBER 17

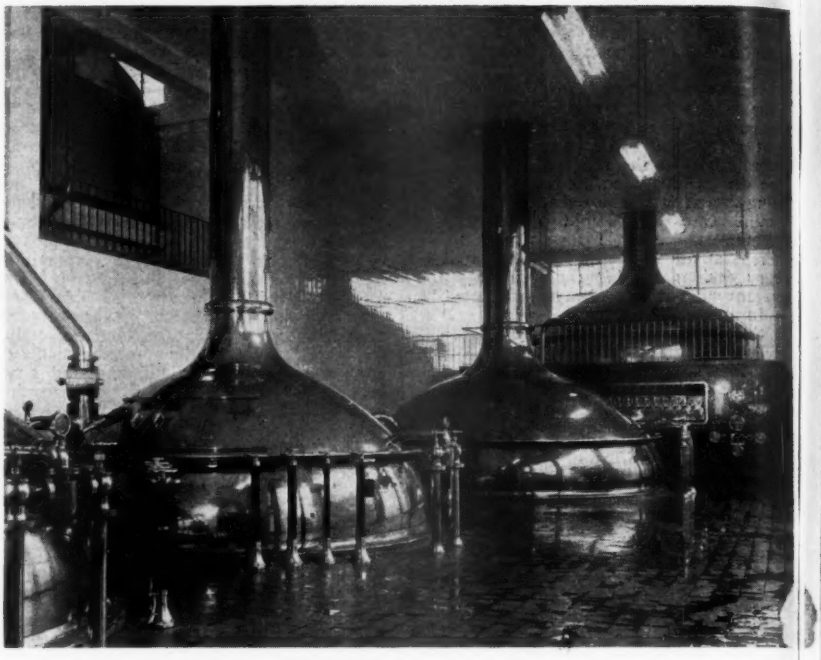
Impressions of Moscow and Kiev, August 1958. Talk by Cleeve Barr. At the AA, 34, Bedford Square, W.C.1. 6.15 p.m.

NOVEMBER 19

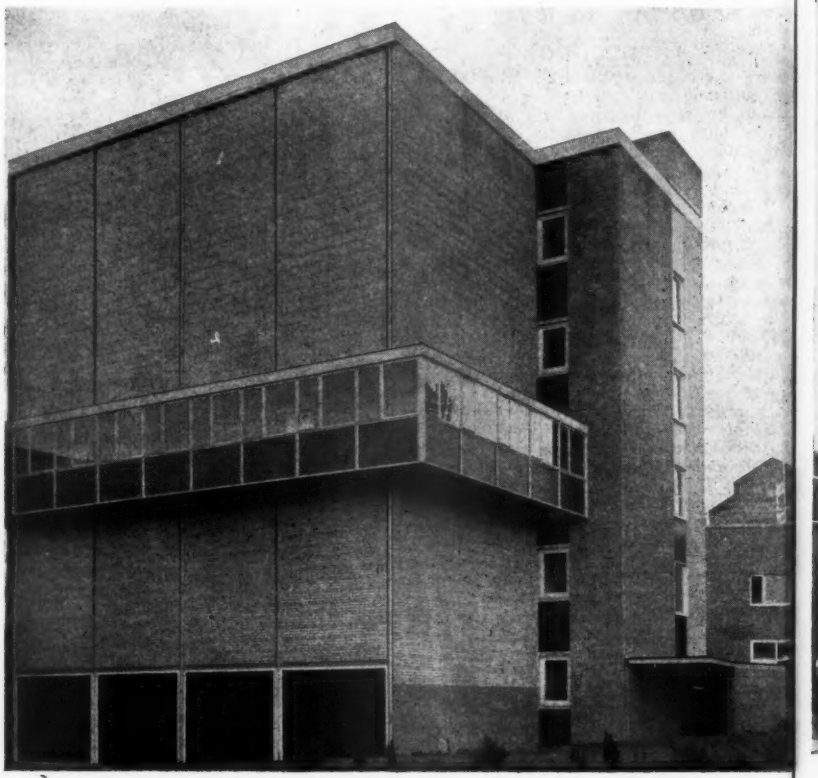
Landscape of the Brussels Exhibition. An appraisal by G. A. Jellicoe and G. P. Youngman. ILA meeting at 1, Park Crescent, Portland Place, W.1. 6.15 p.m.

NOVEMBER 20

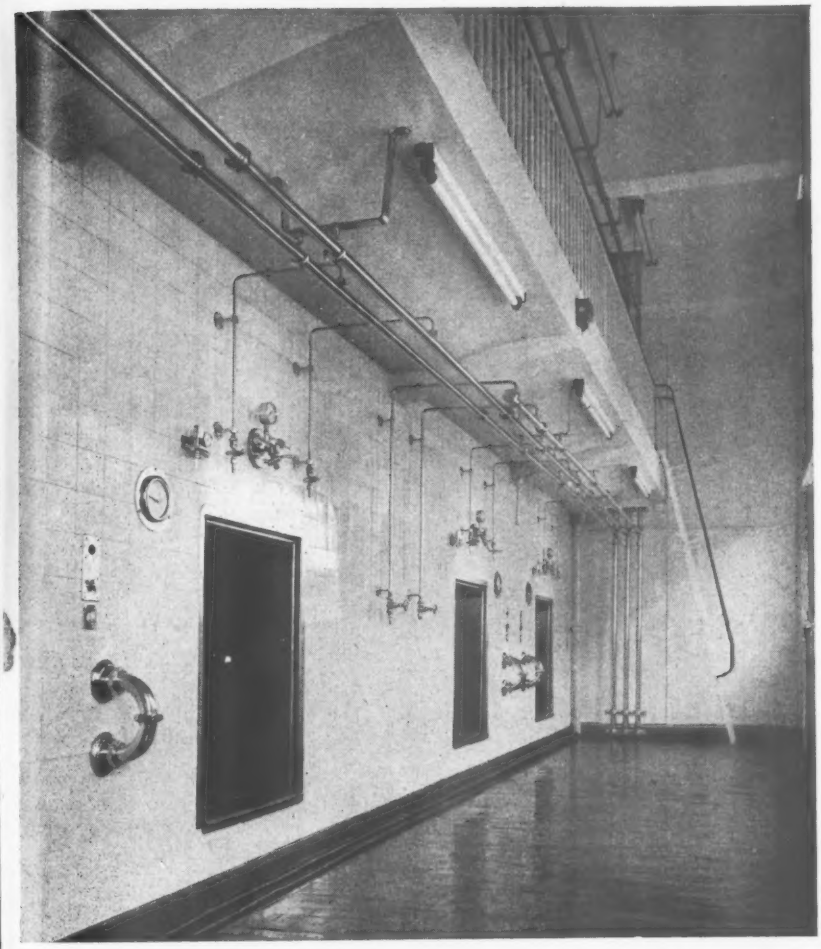
ALTERATIONS TO IND COOPE'S



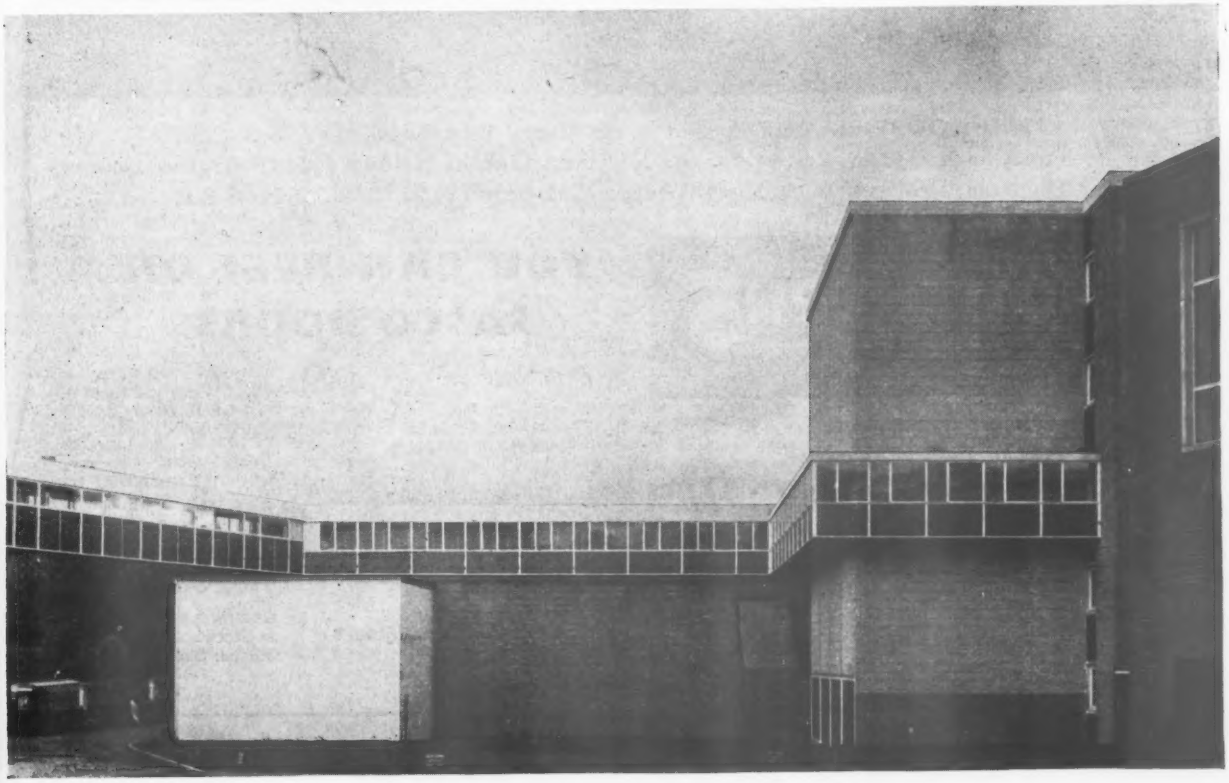
Ind Coope's brewery at Alloa, Scotland, has undergone considerable alterations in the last few years. Old buildings, where still usable, have been retained but re-equipped, but a great deal of rebuilding has also been done. One of the first to be rebuilt was the brewhouse, which was equipped with the astonishingly beautiful copper vessels (imported from Sweden) seen in the photograph above. Consisting of a single large hall to house these vessels, with a service floor beneath, this could have been a very fine building, but is most disappointing, particularly externally. Some later additions have been designed by

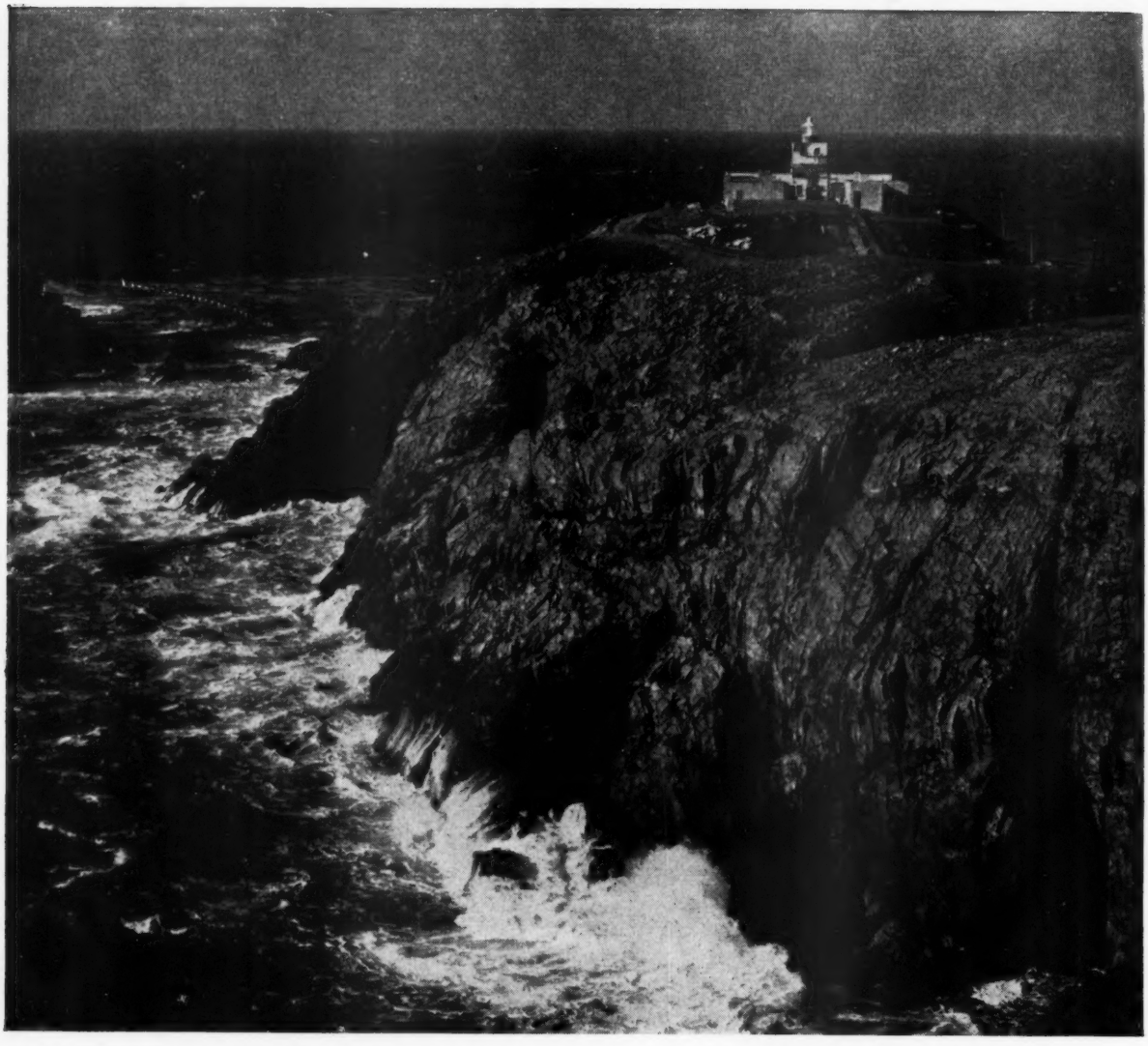


BREWERY AT ALLOA, SCOTLAND



Michael Laird in collaboration with the brewers' engineers. The first stage of his new cold store is shown on the opposite page, bottom. The building is most impressive, and will be more so when completed, as its length is to be more than doubled. The contrast of sheer brick walls with precise detailing gives it the scale proper to its size and function. Left, a view of one of the control rooms in the cold store; below, the cantilevered corridor running round two sides of the cold store continues past the refaced old lager store (centre) and crosses a bridge over the main entrance, to the gatehouse. The function of the corridor is mainly to facilitate the circulation of parties of visitors. The white building on the left of the photograph is to be demolished, as also is the temporary duct connecting the cold store to the lager store. The junction between the two buildings will be resolved when the cold store is completed. Structural consultants, Blythe & Blythe; general contractors James Grant & Son, Ltd. The chief architect to the brewers is W. J. Witham.





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The following account of the decisions taken at last week's meeting of the RIBA Council is based upon the published minutes and the informal press conference held by the President, Basil Spence.

RIBA

Special General Meeting On Constitution Reforms

The First Interim Report of the Constitutional Committee is to be published in the December issue of the *RIBA Journal* and submitted to the membership for discussion at a Special General Meeting on January 6. This is intended to implement the pledge given to the AGM that the Council would report back to a special meeting by the end of the year, and to enable the members to express an opinion on the report before the Council takes any decision.

"It was felt," states the minute, "that, in view of the time factor and of the fact that the Committee's report presented no more than provisional conclusions on a number of points, it would be best for the report to be discussed at the Special General Meeting and for both the Committee and the Council to study the matter more fully in the light of the views expressed by members at that meeting. The report deals with the Constitution of the RIBA Council and the procedure for election in relation to the constitutions of Allied Societies."

The Council has been legally advised that the meeting on January 6 cannot pass any resolution on the interim report. Mr. Spence considered that a resolution would be binding, and therefore unfair to the committee and the council. It seems unlikely that a final recommendation will come before next year's AGM, as the implications of the report are "tremendous," involving the charters of the RIBA and of the Allied Societies, and lawyers' fees which would "run into thousands."

Income tax relief

The RIBA has been informed by the Treasury that the whole of the RIBA subscription, from January 1, 1959, and the annual ARCUK retention fee, will be allowable as a deduction from emoluments assessable to income tax under Schedule E (which applies to salaried employees). When the professions made a joint approach to the Treasury on the question of tax relief for salaried employees it was agreed to ask for a concession only in respect of subscriptions, although some professions, particularly the medical, wanted tax relief for many other things as well. It is now up to each profession to press for any additional tax reliefs (e.g. on expenditure on books or magazines, instruments, etc.), but no approach to the Chancellor is at present contemplated by the RIBA. The "income tax dodge" recently upheld by ARCUK (in which an architect became the employee of a limited company in which he was the shareholder) is going to be considered by the Council.

Urban motorways

Representations have been made to the Minister of Transport urging strongly the advantage of having architects on the study groups on urban motorways that he is setting up. A reply has been received from the Minister, but whether it is a "yes" or "no" has not been disclosed.

Other matters arising

The Council, as a result of representations on the proposed demolition of the London Coal Exchange, has confirmed its policy not to intervene in questions of building preservation except in the case of monuments of national or international importance.

It has also decided to lend its support (verbal, not financial) to the Institute of Contemporary Arts appeal for funds for furnishing, equipping and administering the cultural centre on the South Bank to be built by the LCC.

The typography of RIBA publications is being revised by Herbert Spencer for the Public Relations Committee. A new format and layout for the Annual Report are to be designed. The reports of each committee will not only be edited to secure uniformity in such matters as verbosity and language, but each report, instead of beginning with the names of the committee members, will begin with the committee's work, and only append the names for reference. The aim is to make the report more readable for the benefit of those members who have not read it in the past.

Aesthetic control

Mr. Spence, asked to clarify the suggestion he made in his Presidential Address, that planning committees should be abolished, said that his whole object was to point out the terrible frustrations and restrictions imposed, especially on the younger architect. He added that he felt very strongly about it because he himself had been a victim of the town planning committee of a large city which had told him that one of his designs looked like a bombed building. Mr. Spence did not disagree with the planning officer doing his job, provided he was well qualified. But a planning committee made up of people who thought they knew about architecture, and didn't, was a menace.

Asked if his remedy, to abolish the planning committee, was not worse than the disease, he contrasted the freedom enjoyed by an architect designing for a site on Lake Maggiore, where there was no planning committee, with what he imagined would happen on Loch Lomond where the committee would want crow-stepped gables and stone turnpike stairs. The abolition of planning committees was a simple suggestion, and some good might come out of it by making clear to the Minister architects' very real grievances.

On the role of the planning officer Mr. Spence expressed two views: on the one hand, he should concern himself with the real job of planning; he should give advice, but not have the right to veto designs. But when it was put to him that one of his fellow members of the Council (who is a planning officer) had said that two-thirds of the designs submitted were "awful" Mr. Spence said that a trained planning officer should have sufficient knowledge to know what was good and what ought to be thrown out. Would he accept control by a qualified person? That, he replied depended on the qualified person. He himself was a member of the Royal Fine Art Commission, and he thought they did a certain amount of good.

There was some discussion of a proposal that the RIBA should hold an exhibition of designs rejected by planning committees "to show the public what they are missing" as Mr. Spence put it. He indicated that the Council should consider the idea.

SPEC BUILDERS

Conference on Design

Earlier in the year the architects took the initiative in holding the symposium "Design Pays" on speculative housing (writes a correspondent). On November 6 the Federation of House Builders discussed the subject from their own point of view. The Federation is a body, within the Federation of Building Trades Employers, whose concern is to establish a reputable standard of private house building. For this purpose it has set up the House Builders Registration Council. Firms on this register are prepared to build to not less than a minimum standard and to have their houses inspected at least five times during erection, and to guarantee them for a two year period.

The Federation showed its awareness of the need to co-operate with architects, if standards are to be raised, by inviting Grenfell Baines, Chairman of the RIBA Committee on Town & Country Planning and Housing, to make the opening speech. Under the general text of "learning together" Mr. Baines described the comprehensive nature of house design; "the house must have convenience with good construction and grace." The architect is naturally deeply concerned with the grace and beauty aspect, but any architect who is tuned in only to that one aspect fails as completely as the builder who is only tuned in to cost must fail his clients. The main headings to his brief speech were layout, and planning to make use of every foot of space. In his opinion good layout of mediocre houses is likely to provide better housing than good houses jammed in anyhow.

Some slides of excellent layouts showing communal play space were criticized in discussion on the grounds that local authorities may not be willing to keep up such spaces on private estates. (There are, however, other arrangements that can be made with purchasers to cover this problem.) Central heating makes the whole area of a house available for use. Mr. Baines suggested that although our climate has not driven us to adopt central heating, our new economic climate, with land at a premium, may do so. He showed the plan of a three-bedroomed house of only 600 sq. ft.

Criticisms made by Mr. Charles Bowyer, PPRICS, in his speech on "Land for Building Development," were strongly supported. Many of those present seem to hold planning restrictions responsible for the shortage of land, rather than *vice versa*. Many pleas were made for a cushioning area to adjust priorities within green belt boundaries. It was, however, suggested both by architect and builder that new development need not necessarily be at the expense of agricultural land, but that the obsolete areas of our cities would be a more rewarding site if the immense administrative difficulties could be overcome.

No one went so far as Basil Spence did on Tuesday, in urging the abolition of Planning Committees, but the composition of such bodies, their inability to read drawings, and above all, their slowness in giving decisions, were strongly censured. The proposal was made that such bodies be assisted by advisory panels of architects and builders.

Although cautious spirits like Mr. Bowyer

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MEMBER OF THE METAL WINDOW ASSOCIATION

were heard to say that they had not had time to digest the new Town & Country Planning Bill the general feeling of the meeting was a bouyant expectation of longed-for "freedom." Mr. Calverly, Chairman of the House Builders Registration Council, inexorably read the damning passages from the Royal Fine Art Commission's report describing the visual effects of private development. In his speech on "Housing Standards" he urged that only by insistence on quality can builders hope to live down all that has led the public to associate speculative building with jerry building. It was movingly put from the floor, "We must put our own house in order. We must take our responsibilities with *sensibleness*."

Builders' problems are not all economic or even bureaucratic. Snobbery—the determination to have a house that could not be mistaken for a "council house"—was put forward as an important consideration among buyers. On the other hand Mr. T. W. Jameson, Director of Wimpeys, speaking on "Sales Promotion," thought that propaganda by magazines and television had created a demand for the solid benefits that real planning in connection with modern techniques—the kind of planning Grenfell Baines spoke of—can give.

HOUSE-BUILDING

Progress Report

The number of permanent houses completed in Great Britain in the first nine months of 1958 was 202,048, compared with 224,316 in the same period of 1957. Of these 109,374 were by public authorities, 92,674 by private builders. In England and Wales 87,136 were by public authorities, 89,368 by private builders. September completions in England and Wales were 9,027 by public authorities, 12,005 by private builders.

WHAT WENT WRONG?

Plan Was Not the Master

When leases began to fall in, on the Queens Road Estate, the Borough of Richmond, with praiseworthy foresight, commissioned a Master Plan for the development of the estate as a whole. The architects, Norman & Dawbarn, produced a well-considered plan, treating the estate as a domestic unit to be protected from traffic noise. Tall point blocks at the top and bottom of the long site emphasized its extent and gave tenants the advantage of the magnificent views. Queens Road houses have had their day structurally and are by modern standards, wasteful of land and labour, so the scheme was not opposed.

At the time (July, 1957) of the publication a faint disquiet was voiced that the betterment of the site would displace the professional classes from yet another of its cherished haunts, and the AJ pointed out that planning is only the initial process of architecture. A Master Plan may be the basis of a good scheme; it cannot ensure it. Such a plan can also be used as a shield for mediocre development within its framework.

This might well have happened at Richmond if the Royal Fine Art Commission had not invited itself upon the scene. Its comment on the 20-storey Point Block, in a letter written to the Council was; "It (the Royal Fine Art Commission) appreciates that some special treatment here may be desirable in view of the prominence of the site at the entrance to Richmond Park and suggests that a building of reduced height with a larger superficial area would be more appropriate. This might possibly have some form of geometrical layout." The last sentence seems to be a ranging shot into the future. Buildings without some form of geometrical layout are still extremely rare.

When tenders were invited for the site in question, Development Companies were confronted simultaneously with the Master Plan and the Commission's hint to ignore it. It is very little wonder that the resulting scheme is a hybrid. The long block of maisonettes (neither more nor less geometrical than Mr. Dawbarn's square) expresses an unresolved conflict between heavy horizontality and the light cellular treatment so ably handled by the LCC architects on the other side of the Park. It is arguable whether cellular treatment is appropriate to the Richmond maisonettes, as the unit expressed on elevation is in their case the living room of one family with the bedroom of another family over the top.

The plan is to give every dwelling the benefit of NW and SE aspect, and although it may create acoustic problems, it is at least a genuine idea amidst a welter of borrowed motifs. The maisonettes at the end of the block are clad alternately, one all glass, the next in enough concrete to withstand a siege. The perspective artist, adding delicately to the confusion, has shown the steps flanking this concrete *tour de force* in George V stonework, topped off with imitation lanterns.

The Royal Fine Art Commission labours sincerely to protect our heritage. But to protect it from what? In this case it has protected Queens Road from a coherent plan, but failed to protect it from an incoherent building. What went wrong? The *Manchester Guardian*, in a leader on October 25, suggested that it would better if members of the Commission were consulted before a scheme was prepared, instead of being called in to criticise it. This method might well be tried. It seems too late to try it at Queens Road. However, unless Richmond is to lose all the benefit of the £3,000 spent on the Master Plan, the Estates Committee will have to strengthen its sense of aesthetic responsibility and take some action. The remaining area of the plan can still be handled as a whole. It could even be developed in detail and tenders invited within an architectural framework. The position of client, in a building project, is a responsible one, requiring firm decisions.

DIANA ROWNTREE.

The point block in Norman and Dawbarn's layout, above, has been replaced by the block of maisonettes below.

LGAS

Conference on January 30

The Provisional Executive Committee of the Local Government Architects' Society will report to a General Meeting of the Society, to be held at the R.I.B.A. on January 30, 1959. All local authority offices employing architects are invited to send a representative to this meeting. Only representatives of the membership as it stands at December 31, 1958, will have voting powers. Full details of the recommendations to be made to the meeting by the Provisional Executive Committee will be circulated by December 31.

The Provisional Executive Committee will recommend that the Society should have a General Council not exceeding 35 members, of whom 20 would be area representatives, 12 would be elected nationally, and three would represent "minority" groups in public utilities, etc. The areas for direct representation would be those of the Allied Societies of the R.I.B.A, on the basis of one representative for 30-100 members, two for 100-200, and three for 200 or more.

Membership is now more than 1,200, and only those who join before December 31 can be effectively represented at the General Meeting. Any office groups which are not yet in touch with the Society are asked to elect a "contact," and to inform one of the assistant secretaries, Mr. A. Goss, 5 Beatty Lane, Basildon, Essex, who can also supply membership forms.

BASA

A meeting of delegates of the British Architectural Students' Association, which was attended by 58 students from 24 schools, was held at Leicester on October 24 and 25.

Its task was twofold. First: To plan ways of achieving the aim of co-ordinating the activities of British architectural students. Secondly: To consider its policy on architectural education, with particular reference to the Oxford conference proposals. This work was supplemented by an exhibition illustrating the climate of design in each school.

Students of the Leicester School of Architecture made arrangements for the meeting and included, for a time, the president of the RIBA among their guests. Further information may be obtained from the BASA permanent secretary, c/o the Building Centre, Store Street, London, W.C.1.

YORK INSTITUTE

Advanced Architectural Studies

The recent rapid expansion in the work of the York Institute of Architectural Study has been chiefly in the field of post-graduate and advanced architectural training. Each year a wider range of courses has been organized and it is expected that this rate of development will be maintained for several years to come until the ideal maximum is reached. At the same time, the membership of these courses has been drawn from all parts of Britain, and also from overseas. In order, therefore, to express more clearly the Institute's primary function (and to remove any possible misconception that its scope is local rather than national) it has been decided to change its name to "The Institute of Advanced Architectural Studies."

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THE INDUSTRY

From the industry this week Brian Grant describes a translucent roofing sheet, a washable wall fabric, a guard rail for a cooker, an automatic fire detector and a sill-line heater.

Translucent roofing

Dexion, the slotted angle people, have taken over the manufacture of Undulite glass fibre reinforced translucent sheet. The sheet has been modified to a certain extent, and now has a greater degree of translucency, while the popular roofing profiles are up to 20 per cent. cheaper. There are now two standard thicknesses, and three grades, standard, best weathering and fire retarding, while it is also produced flat, as well as to match the majority of standard roofing sheet profiles. (*Dexion Ltd., Plastics Department, Cartersfield Road, Waltham Abbey, Essex.*)

A washable wall fabric

Crown Wallpapers have just introduced a new washable wall fabric known as Lintex. It is a plastic-fortified cotton backed material with a semi matt non-porous surface which is resistant to scratching and staining, and which can be cleaned with soap and water. A number of patterns and colours are available, and the material is sold in 9-yard rolls at 42s. per roll ready trimmed to a width of 22½ in. Special paste must be used, at 6s. 8d. a 5-lb. tin, which is enough to hang four or five rolls. This paste is applied to the wall, not to the back of the fabric, where there would be too much suction and a tendency to produce air bubbles. (*The Wall Paper Manufacturers Ltd., Kings House, King Street West, Manchester, 3.*)

Safer cookers

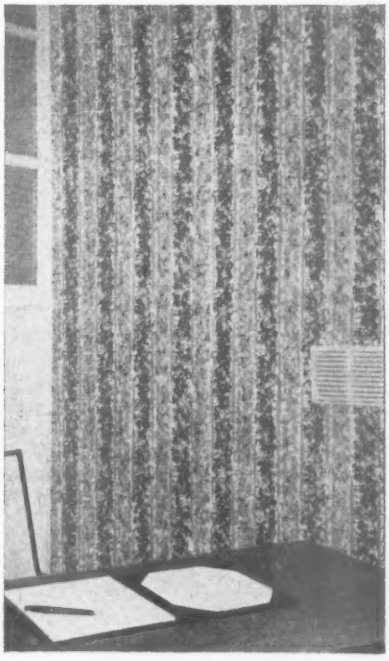
The standard Creda Mercury cooker, illustrated in these notes a few months ago, is now available with a 1½-in. high guard rail round the hob to prevent children from pulling off pans and scalding themselves. The rail is hinged and costs only 10s. 6d. and seems a reasonable investment for houses where there are small children. It is of course the same sort of thing that sailing types have been using for many centuries where pots are liable to jump off the stove without any help from anybody. (*Simplex Electric Co. Ltd., Creda House, Binney Street, London, W.1.*)

Fire detection

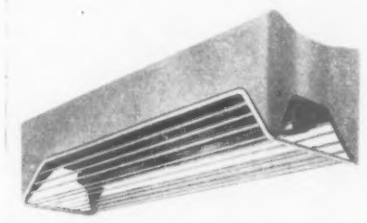
The illustration, right, shows the new Fidela automatic fire detector, which is 2½ in. square in section and only 8 in. long. The sensitive element consists of a stainless steel strip with a centre pin whose movement is biased vertically by a small spring. The alarm is given when the strip expands and the centre pin completes the circuit, but compensation for normal temperature changes is provided by the different coefficients of expansion of the steel base and the stainless strip. With slowly increasing temperature the contacts will close at a temperature of 160 deg. F., but when the temperature changes rapidly the strip will expand far more quickly than the base, and the alarm will go off at a temperature dependent on the rate of rise. The detector may be considered as a device which will automatically adjust itself to a low temperature setting under fire conditions, but which can be set high enough to avoid false calls due to high temperatures slowly reached. (*Associated Fire Alarms Ltd., Claremont Road, Walthamstow, London, E.17.*)

Space heating

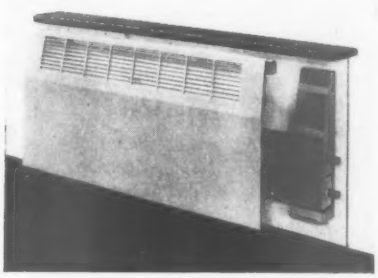
Less than a year ago Copperad introduced Wallstrip skirting heating and have now followed this with Sill-Line, a unit which is for installation below window cills. As the part-sectioned photograph shows, the usual finned tubes are used behind a panel with top outlet grilles and a cold air inlet at floor level. The total projection from the wall face is 2¼ or 3¾ in. according to the arrangement of the fins, and standard heights are 16, 18, 20 and 22 in. Standard lengths start at 20 in., and run in increments of 1 in. up to 5 ft. It is installed with clips and spring fittings so that no screw heads are visible and cleaning is easy. The heaters would normally be insulated with fibre board at the back. (*Copperad Ltd., Colnbrook, Bucks.*)



Above, Lintex washable wall fabric. Below, the Fidela automatic fire detector.



Below, cut-away of the Copperad Sill-Line heating unit.



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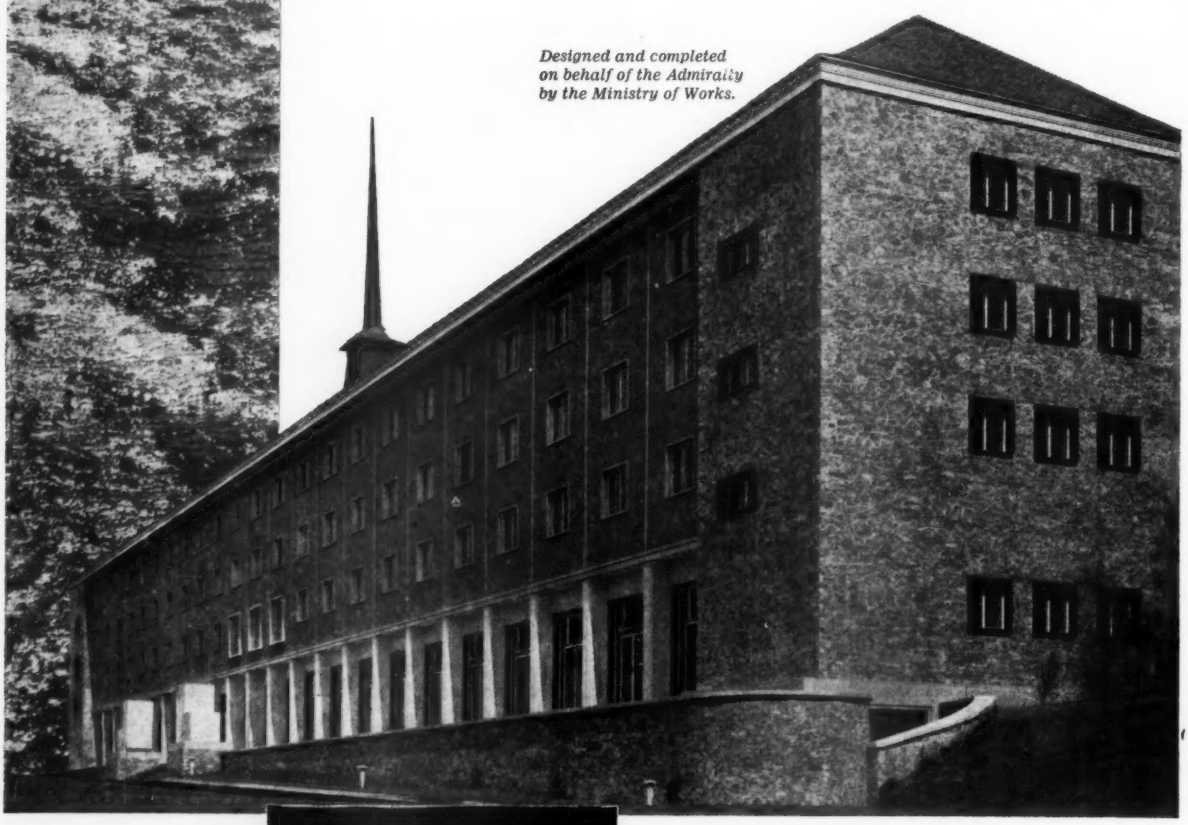

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technical section

INFORMATION CENTRE

A digest of current information prepared by independent specialists; printed so that readers may cut out items for filing and paste them up in classified order.

8.60 surveying and specification
PRICES OF FLATS

The Tender Prices of Local Authority Flats. W. J. Reiners. The Chartered Surveyor, August, 1958.

This, the first RICS Cost Research Panel paper to appear since their final report to the Minister of Housing brings us back to earth. It reveals some of the ways in which tender prices for flats vary with flat size, number of storeys and with region, and it yields some surprising results. For example, that the structure and services elements are cheaper in London than outside.

The paper is too long and meaty to summarize adequately here, so at risk of over simplifying, these are some of the more interesting findings:

Size: A 10 per cent. increase in net floor area gives a 4.7 per cent. increase in price per sq. ft.—but this simple relationship should not be used above 15 per cent., where complications set in.

Size of scheme: For every ten more dwellings in a scheme, the price per sq. ft. drops by 4d. This is an average, the price difference being more marked in smaller schemes than in larger ones.

Location: Outside London, there is no consistent price difference between different regions but flats of the same area and number of storeys in Inner London (metropolitan boroughs) average 9 shillings per sq. ft. more than in Outer London and 16 shillings more than those in the provinces. These figures include site and external works which appear to cost nearly twice as much in London as outside.

If site and external works are excluded and prices are adjusted to a common floor area (680 sq. ft.) interesting results appear: While 3 to 4 storey blocks in Inner London cost 30 per cent. *more* than in the provinces, 9 to 12 storey blocks cost a fraction *less*. Differences between Outer London and the provinces follow a similar curve, with, of course, smaller differences.

The report examines these regional differences in trade cost analyses which show that for low blocks a large proportion of the 30 per cent. occurs in work below ground and in concretor. In high blocks, where total costs per sq. ft. are much the same, finishing trades are more costly in London; structure and services more costly in the provinces.

Number of storeys: In both London and the provinces it costs about 3s. to 3s. 6d. per sq. ft. extra for each additional storey from 3 to 5 storeys. Above 5 storeys, London and the provinces follow different patterns. Inner London: 6 to 8 storey flats cost 10s. 0d. more than 3 storey, 7s. 1d. more than 4 storey and 4s. 6d. more than 5 storey flats. The provinces: 6 to 8 storey flats cost 20s. 8d. more than 3 storey, 17s. 6d. more than 4 storey and 12s. 6d. more than 5 storey.

A final section of the report re-affirms that the variations in tender prices are evenly spread, that the flat prices of different authorities are twice as variable as those of the same authority and that variations are too great to be wholly explained by differences in labour and materials prices. In other words design and specification are largely responsible. The above summary gives only the bald facts—the report itself makes a number of qualifications and warnings as to the significance or reliability of the figures—as is proper for a scientific paper. In his conclusions the author makes two main points: That the high cost of structure and services in provincial high flats requires further investigation and that the wide variation in prices betokens lack of knowledge and a need for more research. Perhaps the most interesting result is that high blocks cost no more in London than they do in the provinces, part of the reason being that provincial flat designers and builders know less about the economics of structure and services than the Londoners do and/or that many of the provincial structures were built by London contractors, the finishings being locally sub-let. Incidentally, the tender prices used for this survey were those of the period 1952-55.

Of what use is this paper to the architect faced with the task of designing flats? It gives him some guide to the effect of size of flat, size of layout, number of storeys and location on his costs—but generalized guidance that actual tender figures might not bear out. If he is in the provinces he could profit by an examination of the way they do things in London—and it might pay to employ a London contractor. If he builds in London he will very likely get better value for money by building high than if he is in the provinces—but he should keep a critical eye on the cost of finishings. One corrosive thought dislodged by this paper—to what extent do contractors pitch their estimates at an "accepted level," regardless of costs? One suspects that progressive contractors building economical designs for co-operative architects make a comfortable living—and the irony of valuable papers like this one is that they help to establish the "accepted level."

From the gradually accumulated background of knowledge about flat costs we should soon be able to publish a graphically illustrated and systematic identification of what is economical in flat design and what is not. If this were backed up by cost planning, and more open-handed control by the Ministry, we might dig out that peculiar shame about having to build flats at all—that being deep in the English collective unconscious.

17.114 construction: general
CONSTRUCTION TEXT BOOK

The Construction of Buildings, Vol. 1: Foundation, Walls, Floors and Roofs. By R. Barry, A.R.I.B.A. (Crosby Lockwood and Son Limited. 18s.)

This is the first volume of a series of four by the senior lecturer in construction at the Brixton School of Building. It is well written, well illustrated and shows just those pre-occupations which are wanted for someone starting off on this subject. To write about the shell of the so-called "simple" building is a task which looks easy, but is not. For it is not only a matter of describing all which has to be described; but, rather, of so organizing the reader's mind that he learns to think of the right things in the right sequence. This is the first textbook we have come across which seems to give roughly the right weight to such diverse interests as ease of work on the site, cheapness, building science and a humane appearance. Another admirable feature is the author's way of discussing recent building history, showing how and why such relatively new habits as the use of the solid ground floor and of internal skins of lightweight blocks have been incorporated in our practice. The attitude of mind which lies at the back of this book and the excellent English in which this is expressed, place it ahead of its rivals. Such criticisms as we have to offer must, therefore, be taken not as deterrents from buying the book, but as possible ways in which the principles it follows might be extended in further editions. Thus in discussing foundations, might there not be a case for discussing the type in which the footing under the walls is integral with the floor slab and can thus be cast at the same time? In the full (and otherwise admirable) section on brick lintels, all the examples shown using concealed support show the lintel itself made of bricks laid on edge. But, as often as not, when you conceal the support, you do it so that you can continue the bond unbroken over the window head. Surely this variety should be shown? Lastly, and bearing in mind how important it is in any system of building pedagogy to get the student to incorporate the facts of building science as he goes along, it would seem to be wise, when discussing upper floors, to discuss how to provide Grade I and Grade II standards of insulation. For this is something which the architect ought to be thinking about when he designs any upper floor and to relegate the issue to some later part of the course dealing with "acoustics" is surely a mistake.

Let us hope that this volume is sufficiently well received to encourage the author to hurry up with the other three.

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technical section

8 SURVEYING AND SPECIFICATION

elemental bills: evidence of use

JOURNAL readers hear much about Bills of Quantities prepared according to function instead of according to trade: "elemental bills" as they are called. But how many people actually use them? And how useful have they found them? To provide an interim answer to these questions the writers of this article Gerald Mallet, Clifford M. Nott, A/A.R.I.C.S., and J. Scott, F.R.I.C.S., instituted a survey, questioning members of rather less than half of the 90 architects', surveyors' and builders' firms who are known to use elemental bills. This article is a summary of their replies.

Objects and scope of the survey

The objects of the survey were limited and were intended to establish the extent to which elemental bills are being used and the reasons for their use.

The questions on which answers were sought were: How many elemental bills have now been prepared? What type of buildings were they for? How many firms or authorities have produced or used them? Lastly, what do the users think of them?

In a survey of this nature it is difficult in collating the facts to present them in an unbiased way, but as far as possible an attempt has been made to do so. To avoid unqualified opinion, only those with actual experience of elemental bills were invited to give evidence. Information was obtained wherever possible through interview, each firm or authority being asked to complete a questionnaire form. During the three weeks available for this work 45 firms or organizations submitted evidence, representing about 47 per cent. of the known users.

Elemental bill headings

Tables 1 and 2 show the sample taken in the limited time. It is to be noticed that no two members of the same office were interviewed.

The format of the bills used is flexible. Basically it is sub-divided into functional components of a building as distinct from the trades set out in the Standard Method of Measurement. Generally the work within an element is billed in trade order, but some surveyors have sub-divided each element into broad functional or operational groups with standardized layout and headings for easy reference. Others grouped the trade items of each functional element in a standard order within each trade bill.

The report on elemental bills by a quantity surveyors' sub-committee of the Royal Institution of the Chartered Surveyors, as published in *The Chartered Surveyor* for April, 1957, contained two sample lists of elements and these we found to be the major subdivision however they were grouped. There are other forms varying from job to job according to the nature of the building and its structure. Furthermore, with a negotiated contract where a builder is nominated at design stage, it is possible to agree with him the element list he requires.

The bill itself is an integral part of the logical processes for properly planned, cost controlled, value-for-money building and it would be unreasonable to weigh the evidence for or against the bill without also considering it in its proper context. It is with this in mind that we introduce the analysis of the comments.

Comments

Architects: generally the 10 architects seen were impressed by the elemental bill and its advantages to them. A measure of their confidence in this new document can be seen from their answers to the question "Have you asked for elemental bills to be prepared?" Eight said they had and the same number found that easier reference on site and in the office was one of the features of these bills. Six found them of great value for cost analysis, four as an aid to cost planning and for cost comparisons, while three answered that they fitted into the pattern of development programmes; to quote one, "They are a good unifying medium for ensuring continuity of development, within defined bounds, throughout the office. Only one could see no advantage in the elemental bill, but modified this comment by saying that the difficulties he experienced were largely due to the species of bill employed.

Repetition of similar items was raised by one office, and an architect very much concerned with standardized procedures in all aspects of the industry thought that there ought eventually to be a standard list of elements.

By far the most interesting developments attributable

Table 1: users of elemental bills

	Architects	*Quantity surveyors*	*Builders*	*Total*
Numbers known to have used elemental bills	20	36	39	95
Numbers interviewed:				
(*a*) Central of Local Government	7	8	16	
(*b*) Private practice	3	11	—	—
Totals	10	19	16	45

Table 2: summary of elemental bills prepared by quantity surveyors

Description	*Number of bills*	*Approximate value* £
Educational buildings	83	7¼m.
Factories, offices, shops, housing, etc.	41	2¼m.
Overseas sewage disposal plant	1	6m.

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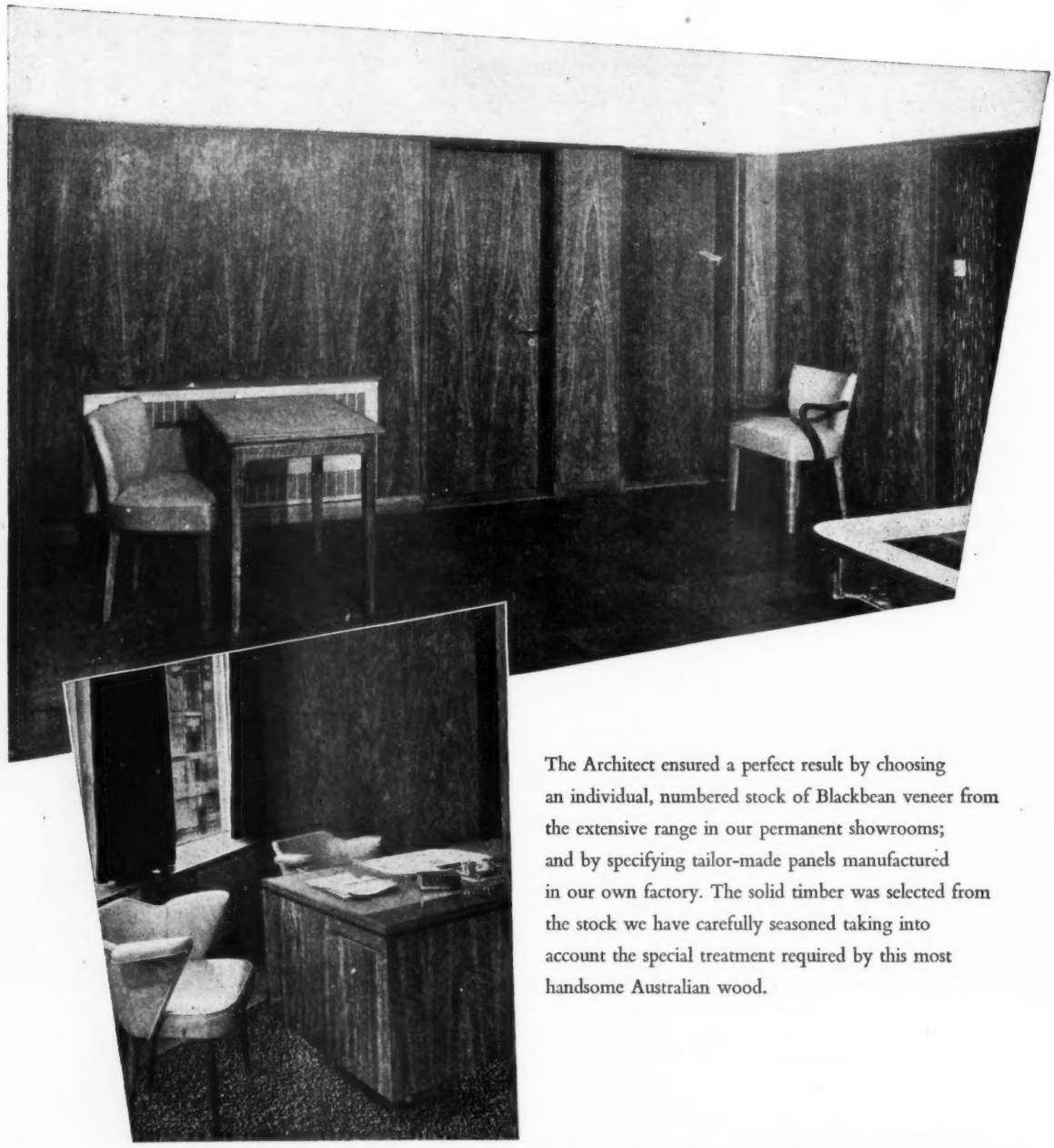

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technical section

directly to the impact of elemental bills have been their effect on architects' office procedures. Half the number interviewed are using or are experimenting with elemental drawings; two have revised their filing systems, and one authority has also gone as far as coding variation orders under elements. In two cases more time has been given to cost planning and one central government department has built its organization around elemental practice, each member of a design group being responsible for a number of elements. Only two architects said that they had been unaffected by the introduction to their offices of the elemental bill.

Quantity Surveyors: in 10 cases, instruction or pressure to produce elemental bills came from the client or the architect, but 12 surveyors said they were willing, in any case, to prepare such a bill and seven had started them on their own initiative. The question of the usefulness of the elemental bill to surveyors brought a great deal of divergent opinion and the principal points mentioned in order of popularity were: Readily available cost information to aid development programmes of a repetitive nature (eight surveyors). Off-the-peg cost analyses and general cost data (seven surveyors). Ease of preparing interim valuations (six surveyors). Four thought that the information is presented in a better way to the builder for pricing and contract control, and the same number considered that it is the only bill suitable for certain forms of construction.

The objections to the elemental bill were largely confined to criticism by seven surveyors of the repetition of items and extra pages of bill. Of the remainder, six surveyors could see no disadvantages; two were concerned with the difficulty of finding *pro rata* rates for final accounts, and the time needed to back-reference similar items and the re-orientation of thought required, were mentioned each by one surveyor.

A question which has, in the past, been foremost in many quantity surveyors' minds is "Can the bill be produced within the fee?" Three offices could offer no answer to this question, but the rest said they could produce the bill within the fee.

Few offices had changed their office procedures, most of them relying on the existing methods of taking-off, working-up and billing, and those who had departed from conventional methods had not done so to any marked degree. There were, however, two surveyors who had completely re-oriented their thinking and had endeavoured to eliminate abstracting, devoting the time saved to comprehensive annotation and indexing.

Builders: the 16 builders were unanimous in saying that the elemental bill took longer to price, although only two firms attempted to say how much longer. One estimated the extra time spent as 7½ per cent. on estimating plus extra time for the typist preparing the subcontractors' inquiries, the other as 25/33½ per cent. However, 13 thought there were advantages attached to the bill which might, in part, justify the extra time spent in estimating, and 11 could see no other disadvantages and considered that estimators got a clearer picture of the job than they would with a normal trade bill.

Fifteen builders thought that the bills were helpful on site and assisted the preparation of interim valuations, though three qualified this to the extent that some types of elemental bills made it more difficult when valuing sub-trades. There was less agreement concerning other aspects of the use of these bills. Nine considered them an aid to programming and deciding the sequence of deliveries to site, and lower down the scale three said that they helped them to determine the labour force required on the job at any one stage, and two of six thought they helped bonus schemes. One civil engineering firm had an elemental bill of quantities produced by quantity surveyors to allow them to tender for an overseas £6 million sewage disposal project on drawings and specification which were in elements.

Two firms who were much concerned with costing had found that the elemental bill was well suited to their own system of recording costs.

Conclusions

While the survey has not indicated a general demand for the adoption of elemental bills, it does establish quite clearly that their use is fairly widespread and that their advantages have been sufficiently attractive to encourage many people to give them a trial.

Architects on the whole favoured the bills and were aware of the wide issues of cost planning and cost control which were involved. Many of them tend to think in design terms of elements and the elemental bill is to them a logical and more easily understood document.

Generally, quantity surveyors did not exhibit any strong feelings either for or against the bills. Most support for them came from surveyors concerned with cost control and cost planning techniques. The principal objection that there are more pages in the bill and a larger number of repetitive items, is a topic that has been vociferously discussed in the past and will most probably continue to be in the future.

It is felt that builders' opinions were coloured by the ratio of jobs tendered to jobs won. Those with a high record of successful tenders on elemental bills were generally more enthusiastic. This is a not unnatural reaction; the estimating staffs of most builders are hard pressed and a firm can ill afford to spend extra time at tender stage unless it is going to reap concrete benefits later.

Elemental bills have clearly established a foothold in some quarters. They have distinct advantages for some people and the disadvantages do not seem to be so great that they cannot be solved by co-operation between architects, quantity surveyors and builders.

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technical section

7 PRACTICE

cost study using standard elements

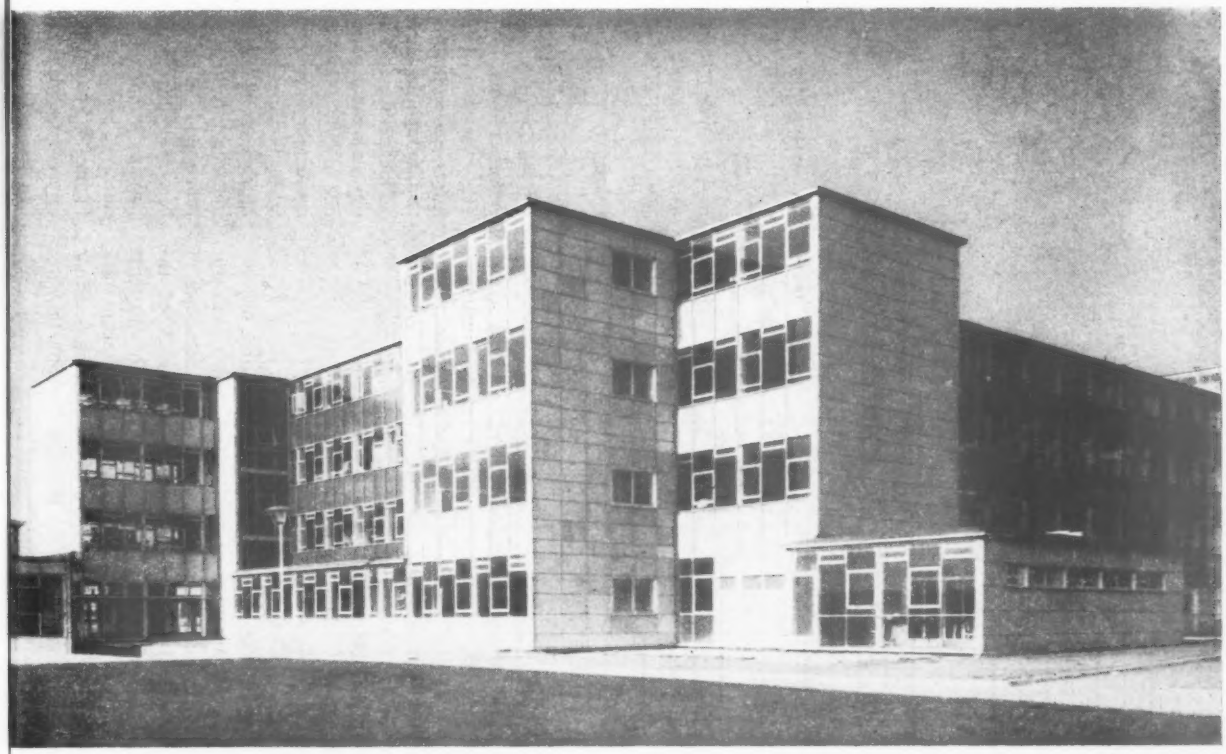
Early this year Hills (West Bromwich) Limited issued a new catalogue of their "834" system of construction which showed an interesting departure from usual practice by quoting actual prices for components fixed. Realising that this practice, if it were to become general, could give the architect the means of making his own cost studies in respect of prefabricated structures, we have asked G. J. Foxley, an architect who has had experience in using this particular system, to show how the catalogue could be used to tackle such basic problems as the influence of plan shape on the cost of structure and on the cost of partitions.

Fig. 1. *A typical school built on the "834" System. Great Barr Comprehensive School, Birmingham. (A. G. Sheppard Fidler, Chief Architect.)*

Since 1945 many architects, and particularly those in public offices where large school building programmes have been managed, have become conversant with systems of construction based on an 8 ft. 3 in. and 3 ft. 4 in. planning grid developed by Hills (West Bromwich) Limited. Recently the firm have developed a system known as the "834" system which, whilst permitting a build-up of building components to be supplied and erected by them according to the wishes of the architect, affords, at the same time, a realistic interchangeability as between the two former and now well-known systems.

There are two aspects of this system which call for comment. The first is that the parts which comprise it are interchangeable with the products of other firms. Hills envisage that some architects may wish to use their steel frame only, some may want them to supply and fix virtually the whole structure and some may want them to supply and fix some proportion intermediate between the two. So that readers may form some idea of the content of the system, we list below the different parts, each part (or group of parts) between colons being an additional feature which Hills will provide (*i.e.* they will provide and fix the steel frame only, or the steel frame plus the purlins, or the steel frame plus the purlins plus the floor slabs, etc. etc.):

Steel frame: steel purlins: floor slabs: roofing slabs, timber eaves units, roof-light upstands: timber rails: timber weather-boarding and/or precast concrete wall units and metal windows: glazed curtain walling, 4-in. internal partitions, 3-in. inner lining to ex-



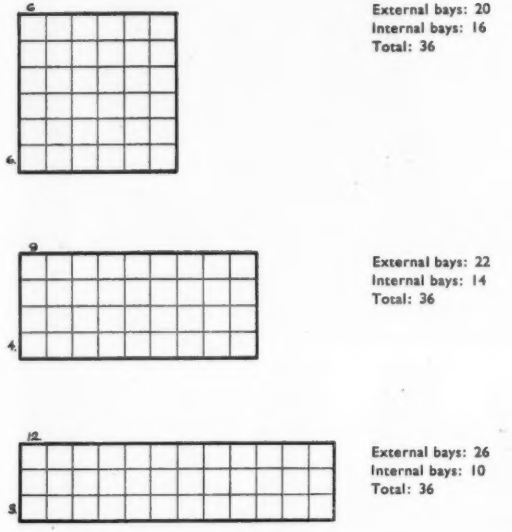


Fig. 2 (left). Three rectangular floor plans on a 3-ft. 4-in. grid.

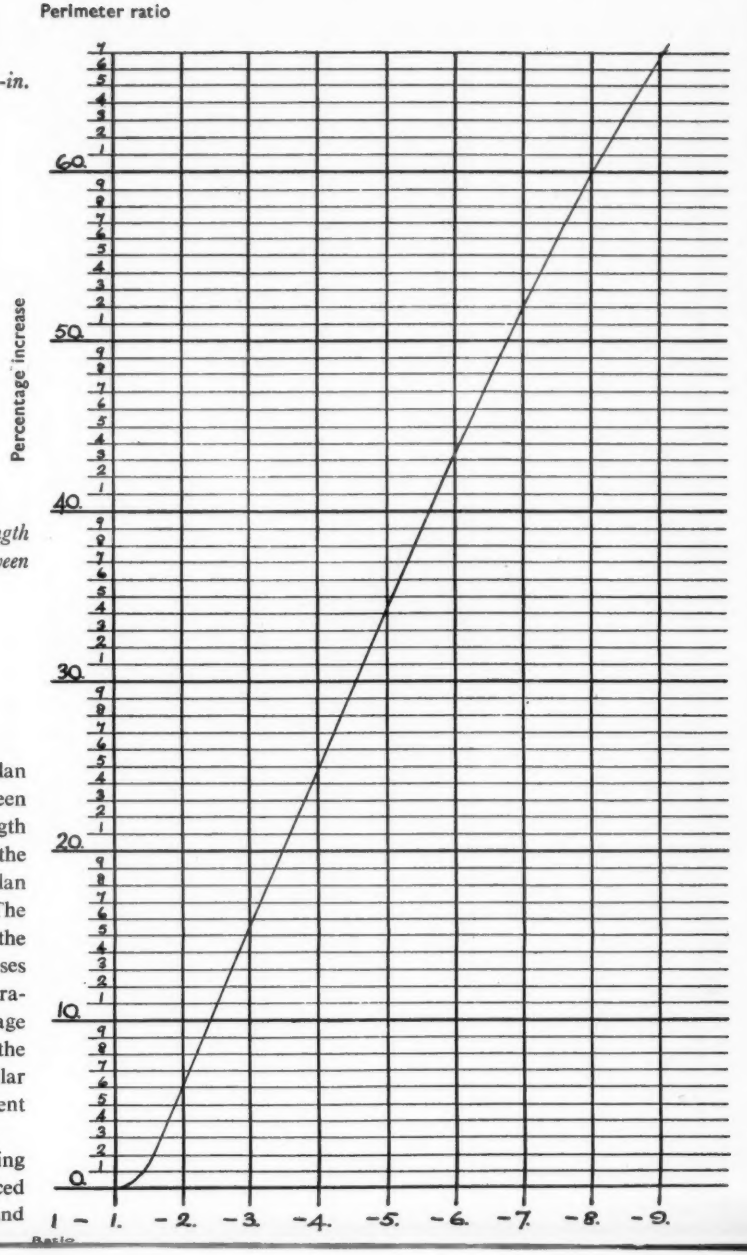


Fig. 3. Graph plotting the percentage increase in the length of perimeter walls against the differing ratios between adjacent sides in a simple rectangular building.

ternal walls, suspended ceiling, external doors, internal door frames, rain-water pipes, roof light tops.

The brochures describing the system have been devised in five sections. These are:

Section 1. The system itself.
Section 2. Standard drawings.
Section 3. Curtain walling.
Section 4. Dry building units.
Section 5. Component price lists.

Other sections may be added later from time to time. The second aspect of this system which calls for comment (and which in fact forms the substance of this article) is the provision in section 5 of the brochure of component price lists; for though these are subject to revision they enable the architect to work out for himself the influence of his planning decisions on the ultimate cost of his building. To show how this can be done we take three typical plans of comparable area, each having ten foot square building bays.

Perimeter walls

The drawings in Figure 2 show a range of three plan forms, each containing 36 building bays. It will be seen that, though the areas are the same for each, the length of the perimeter walls varies considerably. Thus the top plan has a perimeter of 240 ft., the bottom plan one of 300 ft. and the plan in the middle 260 ft. The greater the differential ratio of length and breadth, the longer becomes the perimeter with consequent increases in the cost of cladding, external wall linings, decorations, heating, as well as of services, paths and drainage runs round the perimeter. The graph (Fig. 3) plots the percentage increase in perimeter length of a rectangular building with the increase in the ratio between adjacent sides.

Figures 4, 5 and 6 show the structural elements relating to the three plans shown in Fig. 2. It will be noticed that the 3:12 ratio (Fig. 6) needs one stanchion and one 30 ft. beam more than the 6:6 ratio (Fig. 4).

Figs. 4, 5 and 6. Diagrams showing structure required for the three plans shown in Fig. 2, together with priced lists

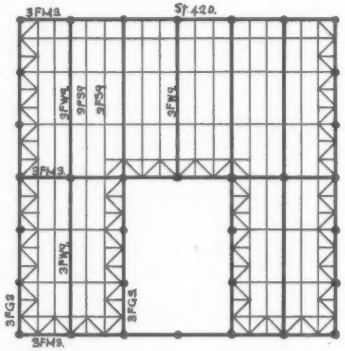
can be done we take three typical plans of comparable area, each having ten foot square building bays.

that the 3:12 ratio (Fig. 6) needs one stanchion and one 30 ft. beam more than the 6:6 ratio (Fig. 4).

1 – 1. – 2. – 3. – 4. – 5. – 6. – 7. – 8. – 9.

Ratio

Figs. 4, 5 and 6. Diagrams showing structure required for the three plans shown in Fig. 2, together with priced lists of members. The designations on plans and tables ("3FM3," etc.) identify the different structural parts listed in the catalogue.

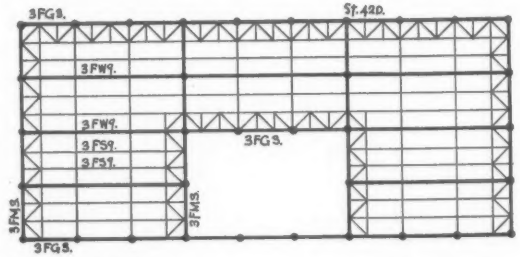


First floor plan

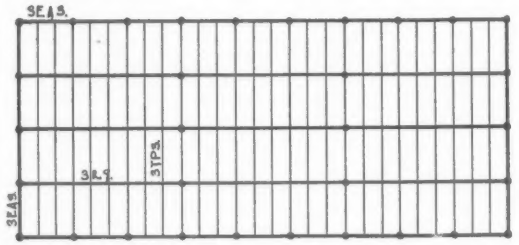
Roof plan

No.	Unit	Each £	s	d	Total £	s	d
33	St.42D	34	19	0	1,153	7	0
7	3FW.9	59	9	0	416	3	0
20	3FS.9	52	9	0	1,049	0	0
18	3FG.3	19	9	0	350	2	0
18	3FM.3	19	15	0	355	10	0
60	3FT.1	1	0	0	60	0	0
60	3FT.5	2	10	0	150	0	0
70	3FT.7	1	0	0	70	0	0
10	3R.9	39	9	0	43	10	0
24	3EA.3	4	8	0	105	12	0
102	3Pt.3	3	11	0	362	2	0
24	3G.3	4	14	0	112	16	0
24	3PF.3	2	17	0	68	8	0
4	3PF/E	1	14	0	6	16	0
24	3EL.3	2	5	0	54	0	0
4	3EL/E		13	0	2	12	0

Total cost : £4,359 18 0



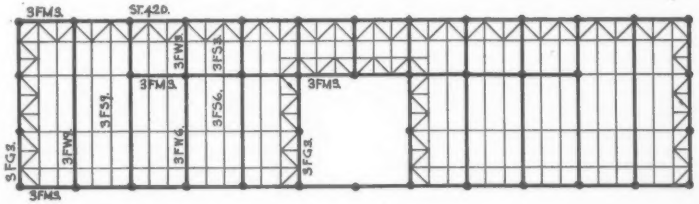
First floor plan



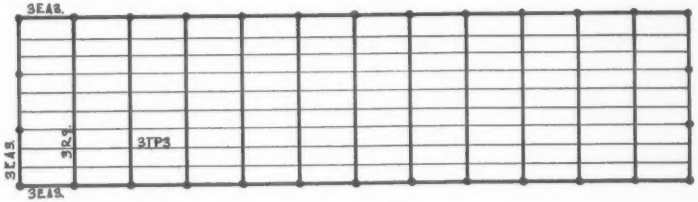
Roof plan

No.	Unit	Each £	s	d	Total £	s	d
34	St.42D	34	19	0	1,189	1	0
7	3FW.9	59	9	0	416	3	0
20	3FS.9	52	9	0	1,049	0	0
21	3FG.3	19	9	0	408	9	0
16	3FM.3	19	15	0	316	0	0
88	3FT.1	1	0	0	88	0	0
32	3FT.5	2	10	0	80	0	0
72	3FT.7	1	0	0	72	0	0
9	3R.9	39	9	0	355	1	0
26	3EA.3	4	8	0	114	8	0
104	3TP.3	3	11	0	369	4	0
26	3G.3	4	14	0	122	4	0
26	3PF.3	2	17	0	74	15	0
4	3PF/E	1	14	0	6	16	0
26	3EL.3	2	5	0	58	10	0
4	3EL/E		13	0	2	12	0

Total cost: £4,722 3 0



First floor plan



Roof plan

No.	Unit	Each £	s	d	Total £	s	d
41	St.42D	34	19	0	1,434	1	0
2	3FW.9	59	9	0	118	18	0
8	3FS.9	52	9	0	419	12	0
6	3FW.6	27	4	0	163	4	0
12	3FS.6	21	0	0	252	0	0
9	3FW.3	15	16	0	142	4	0
16	3FS.3	10	0	0	160	0	0
26	3FM.3	19	15	0	513	10	0
10	3FG.3	19	9	0	194	10	0
104	3FT.1	1	0	0	104	0	0
26	3FT.5	2	10	0	65	0	0
72	3FT.7	1	0	0	72	0	0
11	3R.9	39	9	0	433	19	0
30	3EA.3	4	8	0	132	0	0
96	3TP.3	3	11	0	340	16	0
30	3G.3	4	14	0	141	0	0
24	3PE.3	2	17	0	68	8	0
4	3PF/E	1	14	0	6	16	0
30	3EL.3	2	5	0	67	10	0
4	3EL/E		13	0	2	12	0

Total cost: £4,832 0 0

technical section

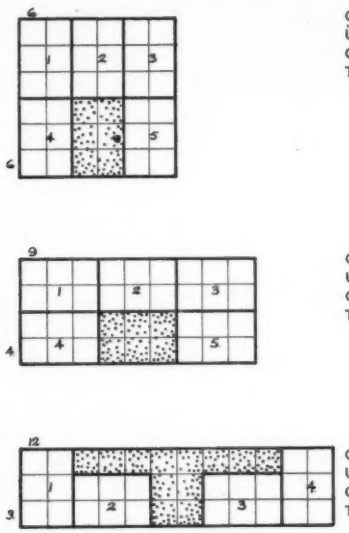


Fig. 7. Diagram showing sub-division of plans given in Fig. 2. Circulation areas dotted.

Internal partitions

The next stage is to calculate the partitioning. Figure 7 shows the same three plans divided into " usable " and circulation areas. " Usable " areas refer here to general teaching classroom areas giving excess over the MOE minimum requirements of 480 sq. ft. nett. The plan in the middle has 10 ft. of partition less than the plan shown at the top. The bottom plan, due to its increased length, requires additional circulation resulting in a provision of only four " usable " areas compared with five given in the other two.

These illustrations speak for themselves but it is necessary now to relate the cost of cladding types to one 10-ft. bay of any of the illustrated plan forms in order to determine which are the most costly and the most economic.

Figure 8 shows a 10-ft. bay of perimeter walling of 21 ft. height, floor to floor, with the following variety of claddings:

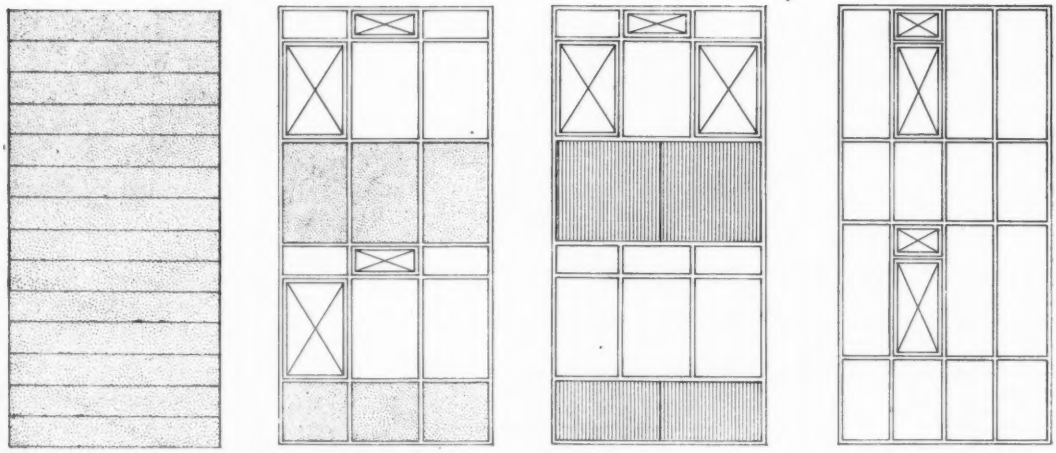
(*a*) All precast concrete spar faced slabs;
(*b*) glass curtain walling;
(*c*) galvanized steel windows and cedar board panels;
(*d*) curtain wall of aluminium, patent glazing bar.

The relative cost per sq. ft. for each bay is shown against each diagram.

Conclusion

This departure marks a landmark in the history of prefabrication in building, for it enables the designer to have an approximately costed plan form in the very early stages of sketch planning, before the sketch plan itself is finally formulated. The fact that the cost of the firm's components, which are to be used, is available to the designer right from the commencement of sketch planning gives added confidence to the designer in being able to prepare his own rough costing without having to expect his quantity surveyor colleague to co-operate. It will, of course, be appreciated that in the special conditions obtaining today, there may be some adjustments to these prices when the final details of a project are decided.

Fig. 8. Drawing showing four alternative wall claddings with prices of each. Note that the prices given for B, C and D include rebated top and bottom timber rails and those for C and D include also price of rebated intermediate rails. The prices shown are approximate.



KEY
A. Solid Hilcon wall slabs. 6s. sq. ft. Fixed complete

B. Hill curtain wall with steel bar and aluminium cap. Muroglass coloured panels. 32 oz. glass. 14s. 6d. sq. ft. Fixed complete

C. Galvanized steel windows and cedar-board panels. ¼-in. r.c. glass as alternative infill. 32-oz. glass. 9s. 6d. sq. ft. with timber. 9s. sq. ft. with ¼-in r.c. glass. Fixed complete

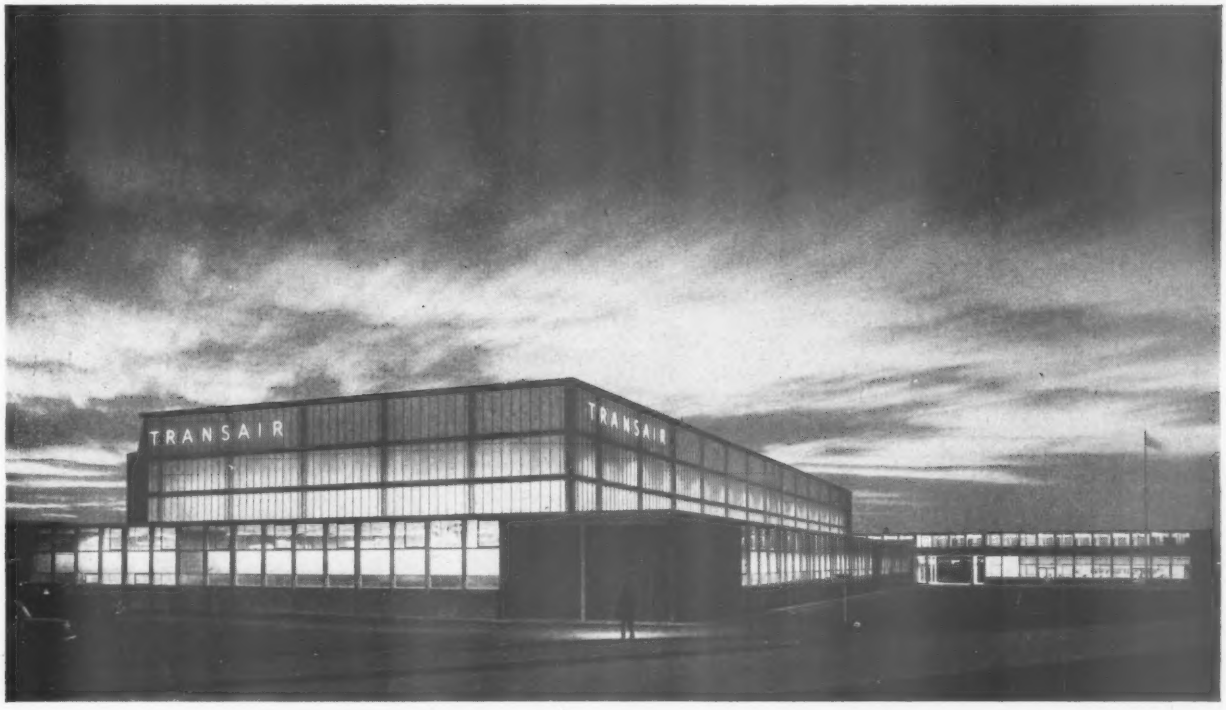
D. curtain wall of aluminium patent glazing bar. All 32-oz. clear sheet. 8s. 8d. sq. ft. Fixed complete

HANGAR, OFFICES and WORKSHOPS

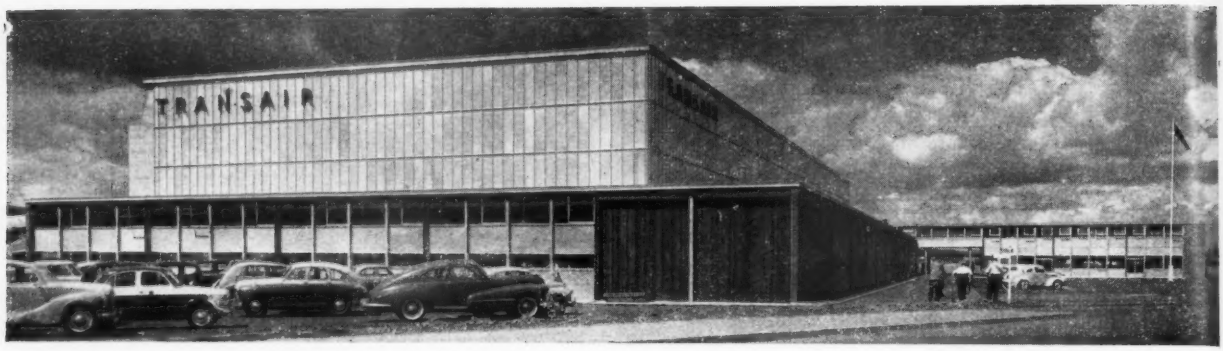
at GATWICK AIRPORT for TRANSAIR LTD; designed by CLIVE PASCALL and PETER WATSON; senior assistant architect J. M. STOVOLD; design and erection of structural frame by the LONDON FERRO-CONCRETE CO. in association with A. J. and J. D. HARRIS; consulting engineers for prestressed concrete apron A. J. and J. D. HARRIS quantity surveyors C. E. BALL and PARTNERS

This, the first building to be erected in the maintenance area at Gatwick Airport, provides an operations base, offices and workshops for an independent airline. The hangar itself is a masterpiece of design, a virtuoso application of the techniques of precasting and prestressing.

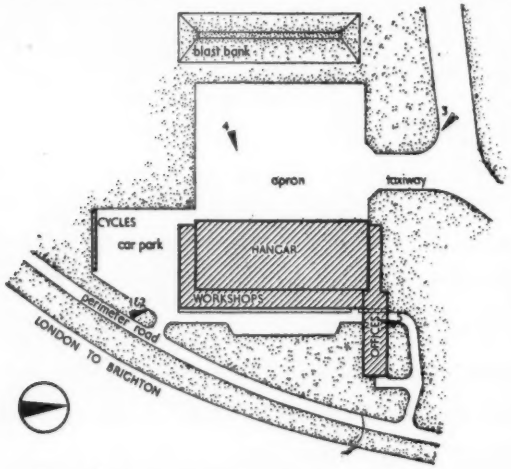
Viewpoint 1: from the south at dusk, showing hangar with workshops in foreground and two-storey canteen and sleeping quarters on right.



building illustrated



Viewpoint 2 (above): the hangar is surrounded on three sides by low annexes. On the south and east these are single-storey buildings containing workshops and stores. On the north is a two-storey block with offices for technicians on the ground floor and administrative rooms on the first. This block is continued beyond the line of the hangar as a wider two-storey wing (far right) with a canteen and kitchen on the gound floor and offices and crews' sleeping quarters on the firs floor. Viewpoint 3 (below): from the north-west. The hangar is 282 ft. long, 112 ft. wide and 41 ft. high with a clear internal height of 30 ft. (giving working clearance over a Viscount's tail). Power-operated sliding folding doors cover the entire opening between hangar and apron. On the left are the two-storey offices, structurally separate from the hangar. Cladding on both hangar and offices consists of a patent glass/glass fibre/glass sandwich giving insulation and light diffusion. At close quarters this is a lively and attractive material, but at a distance and in daylight it is disappointingly dull. This is due mainly to the difficulty of controlling the density and direction of grain, with the result that individual panels reflect differing amounts of light. Technically, of course, the material is extremely useful. In total contrast to the white cladding in aluminium frames, the grey exposed concrete and the white painted sliding doors, are the brick end walls of the annexes. Here a rich red brick was chosen to provide an accent of colour and texture. This concession is largely unnecessary, but once having been made, should have been handled more boldly; the area is too small.



Site plan with photographic viewpoints

analysis

CLIENT'S REQUIREMENTS

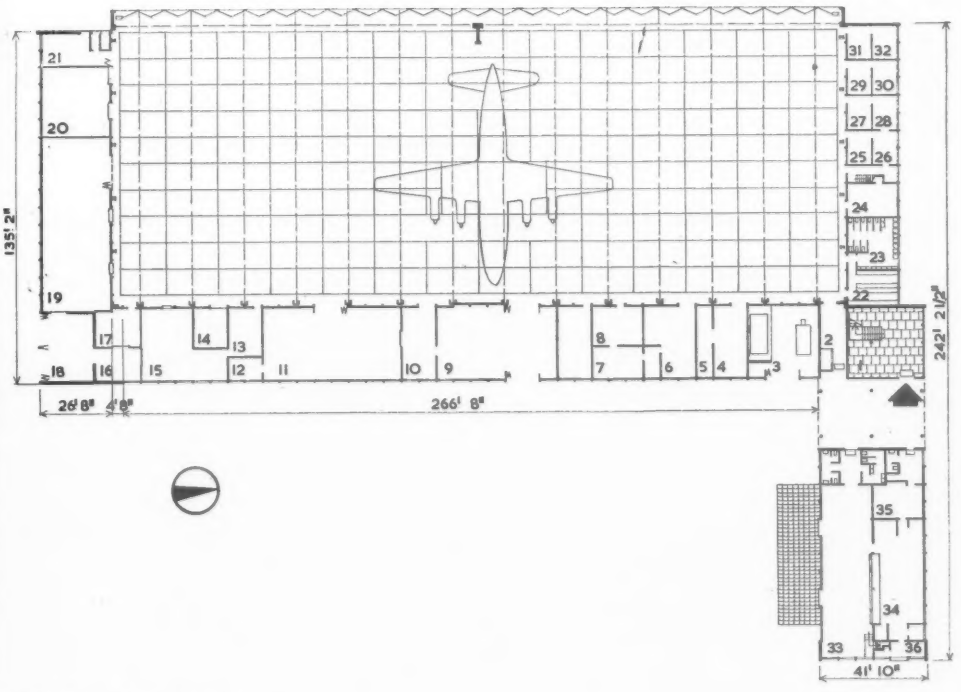
Transair is an independent air line which carries out its own services, and therefore required a workshop-hangar with accommodation for five planes. Ancillary to this were needed stores and special workshops, offices, canteen and sleeping quarters for air crew. The building was also to be an operations base for the air line.

PLANNING AIMS

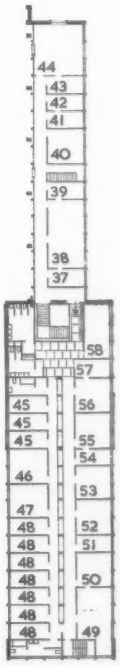
The hangar is 282 ft. long, 112 ft. wide and 41 ft. high (clear internal height, 30 ft.), and is surrounded on three sides by annexes containing workshops, stores and offices, which had to be easily reached from the hangar floor. On the north side the 2-storey annex is continued beyond the line of the hangar in the form of a wider 2-storey wing. This contains on the ground floor an entrance hall, canteen, kitchen and directors' dining room, and on the first floor, office space and crews' sleeping quarters. A prestressed concrete apron stretches in front of the hangar.

SUMMARY

	Floor area	*Total cost*	*Cost per sq. ft.*
Hangar	31,095 sq. ft.	£111,052	71s 5d
Workshops	12,282 sq. ft.	£40,000	65s 1¾d
Offices, etc.	13,129 sq. ft.	£54,308	82s 8¾d
Apron		£16,892	
Site layout, roads, paths and car park		£7,648	
Total cost		£229,900	
Tender date	September 1956		
Work began	October 1956		
Work finished	May 1958		



Ground floor plan [Scale: $\frac{1}{64}$" = 1' 0"]



First floor plan

KEY:

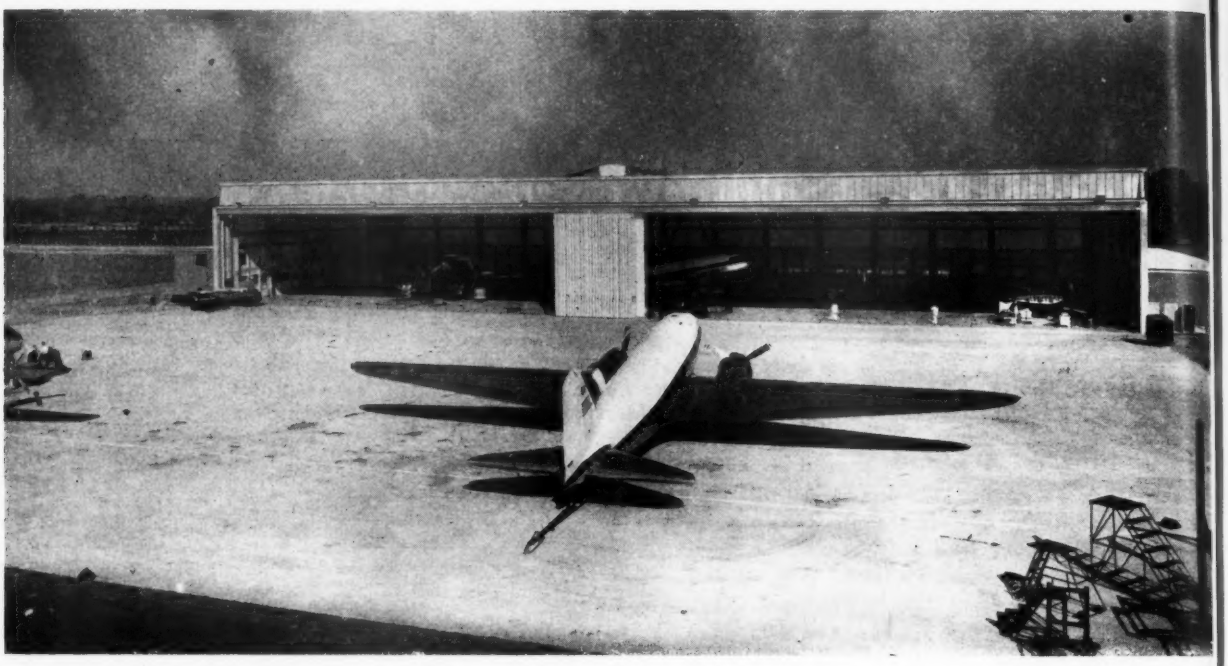
Ground floor

1. Main entrance
2. Works entrance
3. Boiler room and electrical intake
4. Hydraulic
5. Test
6. Electrical workshop
7. Radio test
8. Radio
9. Power plant workshop
10. Cleaning bay
11. Detail workshop
12. View room
13. Storekeeper
14. Wheel bay
15. Commercial store
16. Goods in
17. Quarantine
18. Garage
19. Bonded store
20. Components
21. Paint
22. Lockers
23. Works lavatory
24. Upholstery
25. Technical records
26. Chief inspector
27. Hangar foreman
28. Chief engineer
29. Charge hands
30. Inspector
31. Flight officer
32. Store
33. Canteen
34. Kitchen
35. Executive dining
36. Bins

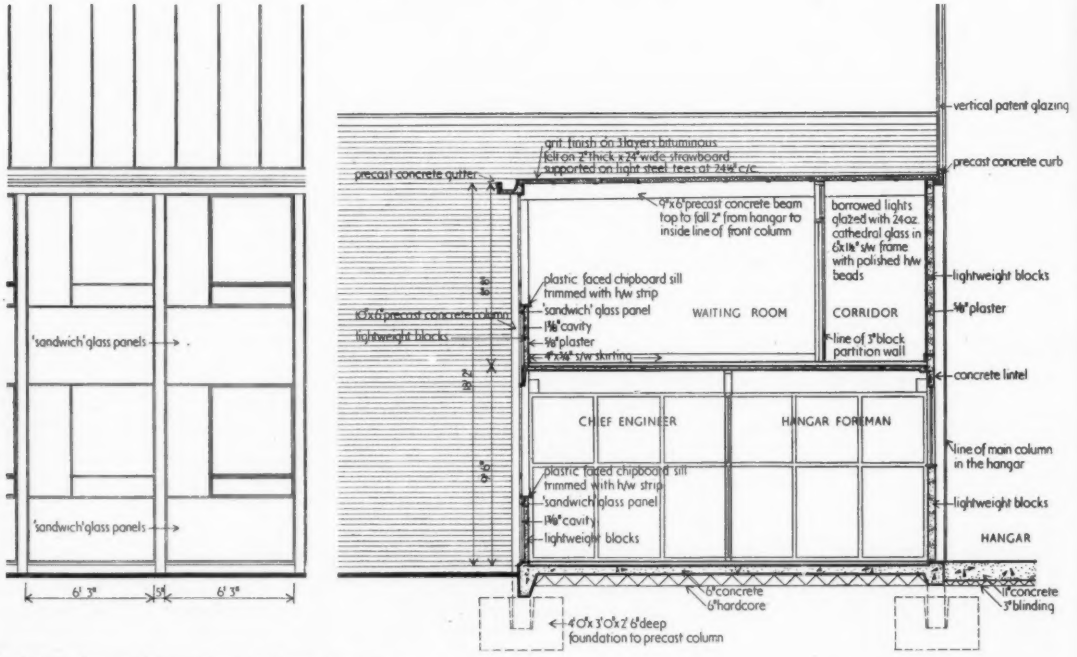
First floor

37. Chief pilot
38. Operations general
39. Operations manager
40. Public relations
41. Air crooping
42. Waiting
43. Secretary
44. Managing director
45. Hostess
46. Chief hostess
47. Pilots' rest room
48. Pilots' bedroom
49. Accounts office
50. Chief accountant
51. Projects manager
52. Rolls Royce
53. Channel bookings
54. Secretary
55. Director
56. Commercial manager
57. Secretary
58. Telephones

building illustrated

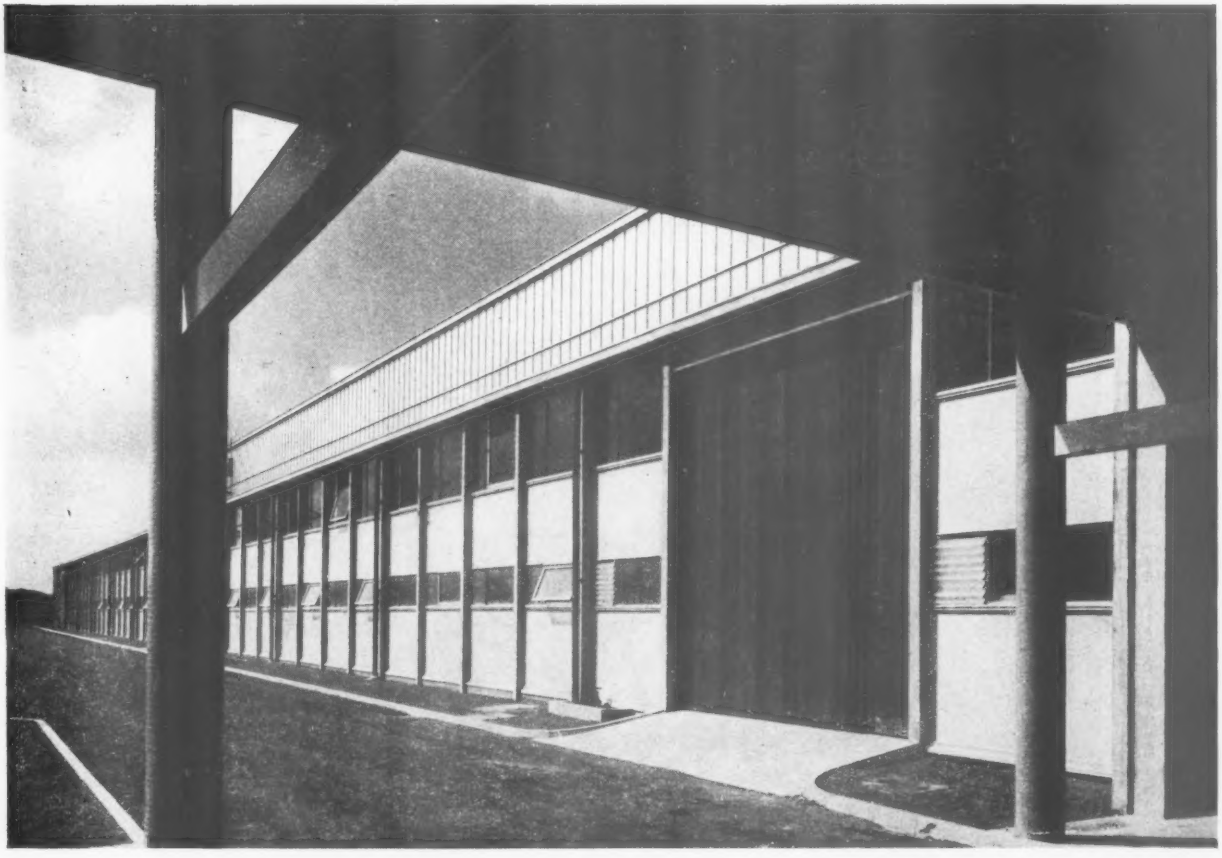


Viewpoint 4: from the west. The prestressed concrete apron in front of the hangar measures 290 ft. × 230 ft. overall. The slab is 5 in. thick and is laid on two layers of waxed paper on 3-in. concrete blinding. It is prestressed by Freyssinet cables, each consisting of 12 0·2-in. diameter wires, at 3-ft. centres longitudinally and 5-ft. centres transversely. For construction the apron was divided across its width into 15-ft. lanes. One lane was cast complete in one day and three of the five cables laid in it were stressed the following day. This early prestress prevented the development of shrinkage cracks. When concreting had been completed, the transverse cables were threaded through prepared holes and stressed, after which the remaining longitudinal cables were stressed. All cable ducts were then pressure grouted. The advantages of prestressing over ordinary mass or reinforced concrete for this purpose are: (a) thinness—less material to excavate, less concrete used and less to handle; (b) less weight on subsoil—in this case, clay; (c) good dispersal of imposed load, particularly valuable on poor load-bearing soil; (d) no cracks, and therefore no deterioration through weathering; (e) no joints to form or fill and none to maintain (a) not inconsiderable item for conventional aprons). Tests made recently by the Road Research Laboratory have indicated that this apron is capable of carrying any aircraft at present in commercial use or planned for the near future.


'sandwich' glass panels
'sandwich' glass panels
6' 3"
15'
6' 3"
vertical patent glazing
grit finish on 3 layers bituminous felt on 2" thick x 24" wide strawboard supported on light steel tees at 24" c/c
precast concrete gutter
precast concrete curb
9"x6" precast concrete beam top to fall 2" from hangar to inside line of front column
borrowed lights glazed with 24oz. cathedral glass in 6"x1½" s/w frame with polished h/w beads
plastic faced chipboard sill trimmed with h/w strip
'sandwich' glass panel
1½" cavity
½" plaster
9"x6" precast concrete column
lightweight blocks
WAITING ROOM
CORRIDOR
lightweight blocks
½" plaster
line of 3" block partition wall
4"x¾" s/w skirting
concrete lintel
CHIEF ENGINEER
HANGAR FOREMAN
line of main column in the hangar
plastic faced chipboard sill trimmed with h/w strip
'sandwich' glass panel
1½" cavity
lightweight blocks
lightweight blocks
HANGAR
6" concrete
6" hardcore
1" concrete
3" blinding
4'0"x 3'0"x 2' 6" deep foundation to precast column

Part elevation and cross section through offices [Scale: ⅜" = 1' 0"]

Viewpoint 5 (below): the annexes are constructed of r.c. columns at 6-ft. 8-in. centres carrying concrete trough plates. Infill panels are of patent insulating/diffusing glass sandwich panels, and of top hung and pivot windows, all framed in aluminium. Columns have a high quality finish and are left exposed. Rainwater pipes (seen here on every fourth column) are enamelled cast iron. Columns in the foreground are finished with blue mosaic. The entire face of the building, with the exception of a few doors, is therefore maintenance-free. Above: the main entrance. The sensitive and extremely successful handling of colour in the entrance hall and upper landing does much to compensate for the disappointingly vague junctions between staircase and wall. The stair has a polished hardwood handrail and white painted blockboard guard rail mounted on black m.s. "tee" balusters. Walls and structure are blue, ceiling white. The whole space could have been quickened by some gay and graceful furniture, but it is curious that the very considerable appreciation and awareness of the basis of good design displayed by the client in other directions is not echoed in the choice of furnishings.

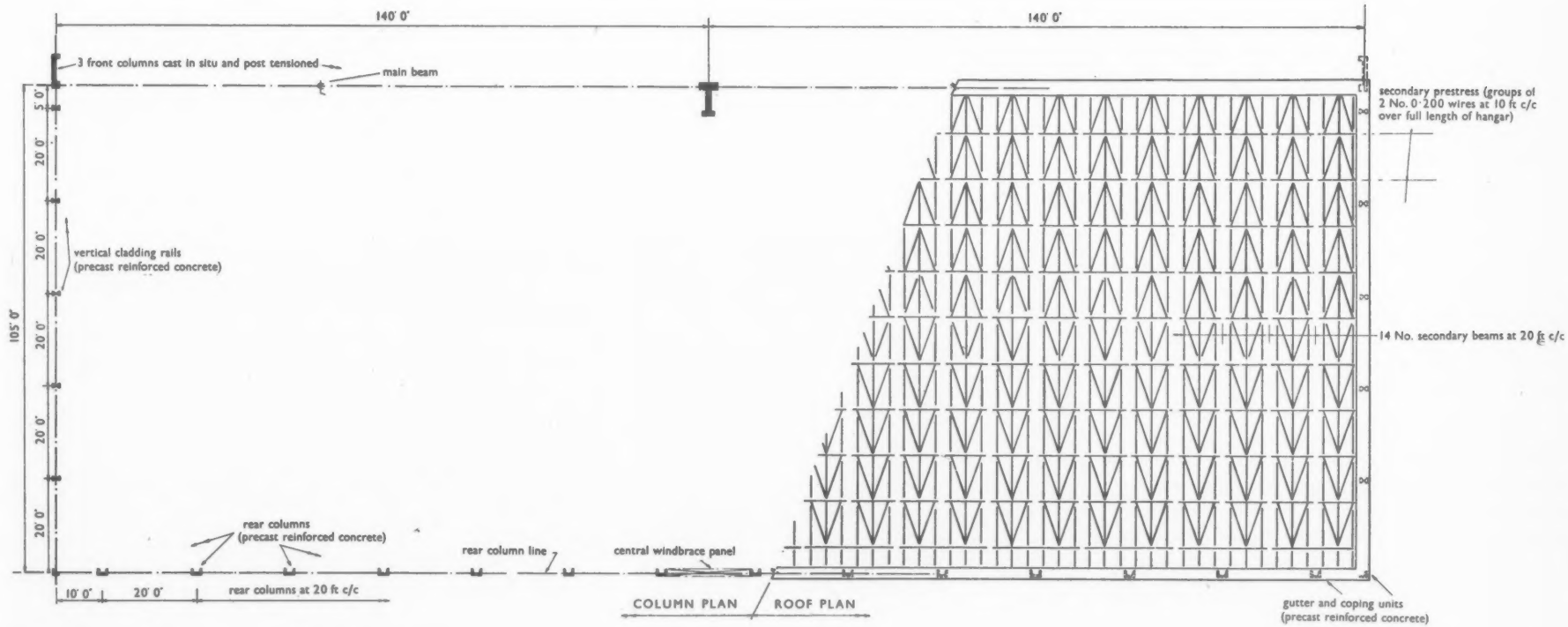


Opposite, left: the hangar roof structure, in which every component and almost every joint can be seen, is a very remarkable

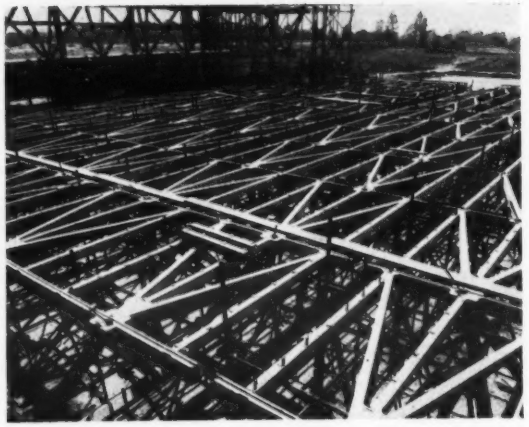
of the frame this sequence of reasoning prevailed: 1. Total depth was not highly critical. 2. The greatest economy would

inclining the webs to form a triangular "space frame" of very slender members. 6. These decisions could only be econ-

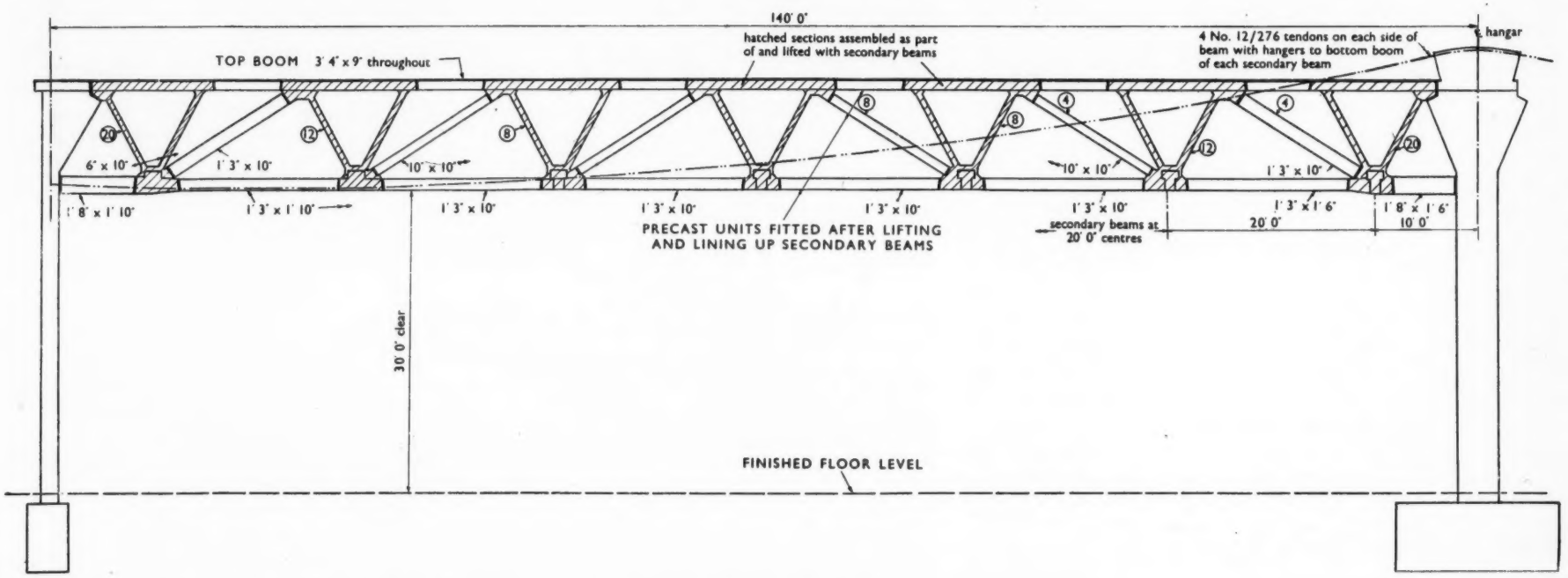
Opposite, left: the hangar roof structure, in which every component and almost every joint can be seen, is a very remarkable example of the application of precasting and prestressing techniques. The taut space frame of slim members encloses the space with extraordinary confidence and economy. The tensions are controlled and combined to form a strong and fundamentally simple frame, reminiscent of the serenity, economy and suppressed vitality of Gothic. Opposite, right: in the design of the frame this sequence of reasoning prevailed: 1. Total depth was not highly critical. 2. The greatest economy would therefore be obtained by using a relatively deep lattice structure. 3. Lattice beams at wide centres would require heavy purlins and rafters to support roof decking. 4. Therefore the top boom of the beam should be split to eliminate rafters and purlins. 5. This could be turned to further advantage by allowing horizontal wind bracing to be introduced and doubling and inclining the webs to form a triangular "space frame" of very slender members. 6. These decisions could only be economically acceptable if the junctions of webs (the nodes) and the ribs themselves could be standardized and simplified for mass production. An analysis of all conditions proved that this could be achieved. 7. Two further advantages of this three-way triangulation were (a) sections could be stressed on the ground, and (b) "beams" could be hoisted without buckling.


140' 0'
140' 0'
3 front columns cast in situ and post tensioned
main beam
secondary prestress (groups of 2 No. 0·200 wires at 10 ft c/c over full length of hangar)
vertical cladding rails (precast reinforced concrete)
14 No. secondary beams at 20 ft c/c
105' 0'
5' 0'
20' 0'
20' 0'
20' 0'
20' 0'
20' 0'
rear columns (precast reinforced concrete)
rear column line
central windbrace panel
10' 0'
20' 0'
rear columns at 20 ft c/c
COLUMN PLAN
ROOF PLAN
gutter and coping units (precast reinforced concrete)

Plan of hangar and detail of top chord of secondary beams



Far left: the roof structure consists of 8-ft. 8-in. deep triangulated precast prestressed space frames or "beams" at 20-ft. centres spanning the full width of 105 ft. 6 in. These "beams" have top booms split into six parallel members at 3-ft. 4-in. centres to support lightweight compressed straw-slab decking. At the rear these are supported on r.c. columns tied together by precast edge beams in the form of gutters, and at the front by a 10 ft. deep main beam which is continuous over the two 140-ft. clear spans of the opening. This beam (on left of picture) was formed by fitting additional members between the ends of the secondary beams and applying prestress through parabolic cables external to the beam. Left: all members of the frame were precast on site and assembled on the floor of the hangar with mortared square butt joints.

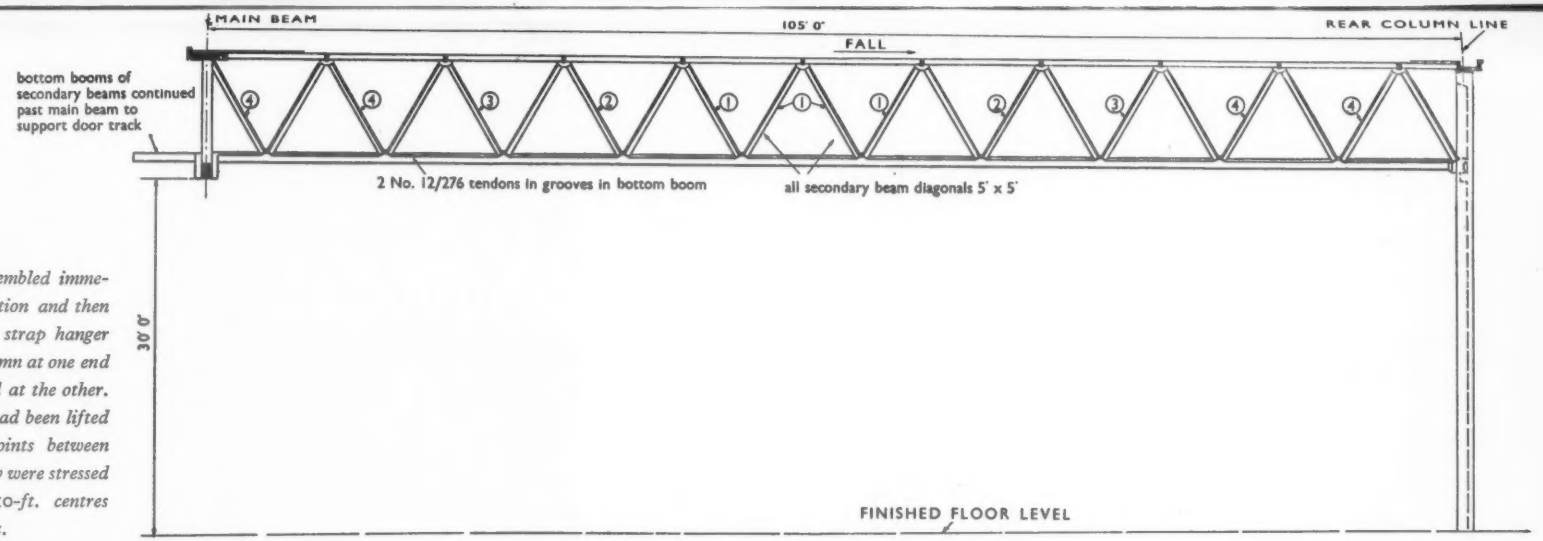

140' 0"
hatched sections assembled as part of and lifted with secondary beams
4 No. 12/276 tendons on each side of beam with hangers to bottom boom of each secondary beam
℄ hangar
TOP BOOM 3' 4" x 9" throughout
6" x 10"
1' 3" x 10"
10" x 10"
1' 8" x 1' 10"
1' 3" x 1' 10"
PRECAST UNITS FITTED AFTER LIFTING AND LINING UP SECONDARY BEAMS
secondary beams at 20' 0" centres
1' 3" x 1' 6"
20' 0"
10' 0"
30' 0" clear
FINISHED FLOOR LEVEL

Elevation of one span of main beam. Number of 0·276-in. prestressing wires in each "tension" diagonal shown in circles

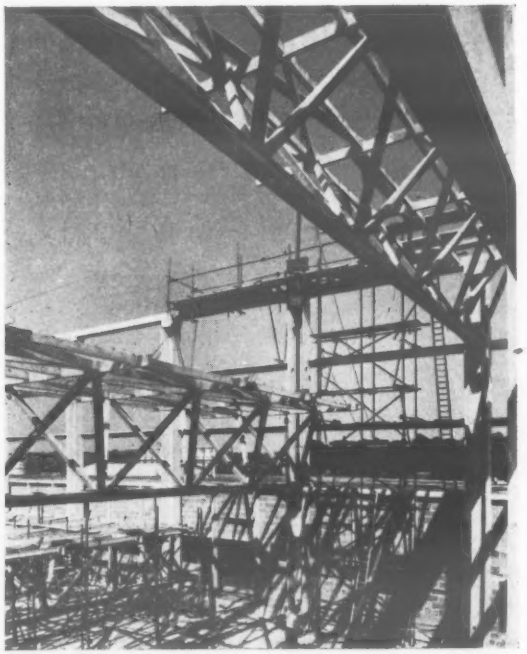
Cross section through hangar showing side elevation of secondary

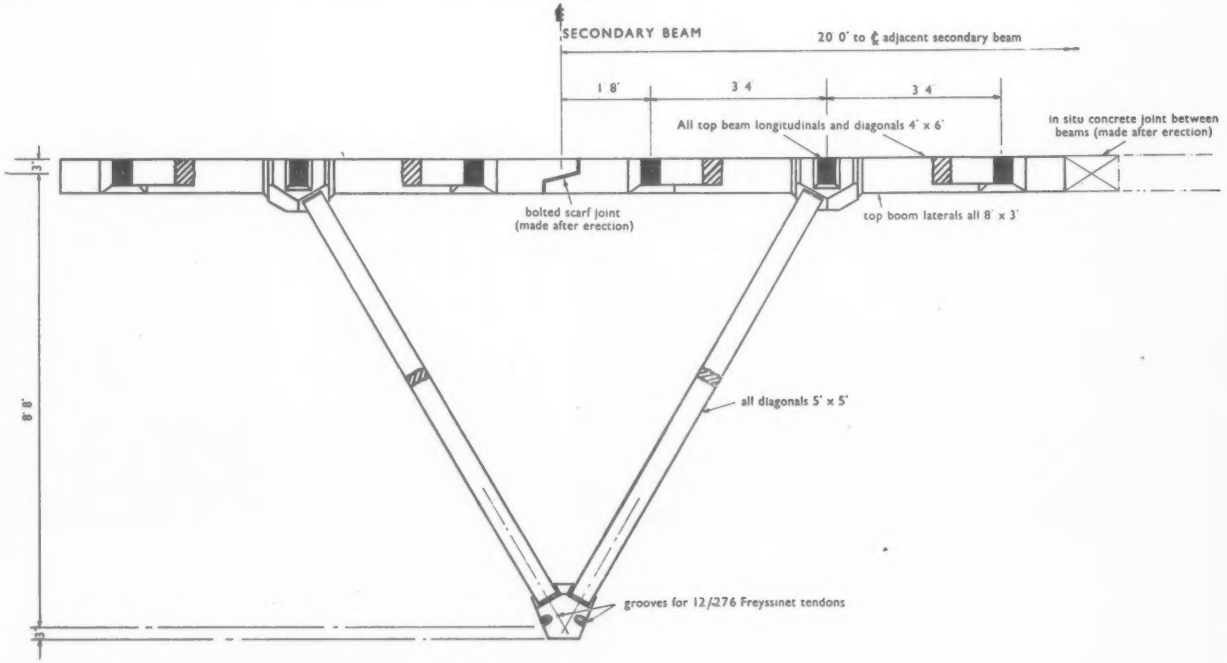
Elevation of one span of main beam. Number of 0·276-in. prestressing wires in each " tension " diagonal shown in circles

Cross section through hangar showing side elevation of secondary beams, No. of 0·276 in. prestressing wires shown in circles.


MAIN BEAM
105' 0"
FALL
REAR COLUMN LINE
bottom booms of secondary beams continued past main beam to support door track
2 No. 12/276 tendons in grooves in bottom boom
all secondary beam diagonals 5' x 5'
30' 0"
FINISHED FLOOR LEVEL

Below: each beam was assembled immediately under its final position and then hoisted in 6-in. lifts on a strap hanger housed in the U-section column at one end and supported on a scaffold at the other. After all secondary beams had been lifted into position and lateral joints between " purlins " made in-situ, they were stressed together transversely at 10-ft. centres using 0·2-in. diameter wires.




SECONDARY BEAM
20 0" to ℄ adjacent secondary beam
1 8"
3 4"
3 4"
All top beam longitudinals and diagonals 4" x 6"
in situ concrete joint between beams (made after erection)
bolted scarf joint (made after erection)
top boom laterals all 8" x 3"
all diagonals 5" x 5"
8' 8"
grooves for 12/276 Freyssinet tendons

Cross-section through secondary beam

building illustrated

Above : the main beam is supported on three columns prestressed to take bending moments due to horizontal wind forces. The external parabolic cables designed to give uniform uplift and the correct horizontal compressive forces, are encased in pitch fibre pipes and grouted up. Hangers from cable to bottom boom consist of six ½-in. m.s. bars protected with concrete and painted black. Each secondary beam bottom boom projects through the main beam to support a small canopy and the door tracks. Total weight of roof structure is only 22 lb. per sq. ft.

Below: columns in the two end walls are hinged to secondary beams, leaving them free to deflect, and remaining wind loads are taken on a V-brace in the back wall of the hangar (see viewpoint 3). The high level of daylighting necessary for maintenance work is ensured by a complete wall of patent (diffusing) glazing on 3 sides above the roof level of the annexes. As far as the overall dimensions of the hangar are concerned one of the key points was the decision to use hydraulically operated platforms (just visible in the foreground) to lower the aircraft to floor level. By eliminating the usual "dock"—a fantastic mobile assembly of scaffold tubing which might cost up to £20,000 —this hydraulic deck (at a cost of approximately £4,000) enables five aircraft to be accommodated in an area normally occupied by only two. Apart from this extremely useful economy in space and equipment, the floor deck has other advantages, among them, the saving in man hours and the consequent quicker turn-round and increased aircraft utilisation. Moreover, a higher standard of workmanship is obtained since the platforms may be set at any required height and men are therefore working with their feet on the ground rather than suspended in mid-air on a scaffold. Special slots cast in the slab house the propellor blades. The cubic content of the hangar (excluding roof space) was kept down to below the 1,000,000 cu. ft. mark, which put it into a lower category for flame proofing. All electrical connections below 4 ft. 6 in. require to be flame proofed and these are grouped together with compressed air outlets in six small service pits in the floor. Careful consideration of a variety of structural methods and cladding materials, coupled with skill and ingenuity in solving the technical and planning problems, has resulted in a most successful building at a cost of about half that of similar maintenance bases built since the war.

analysis

Element	Cost per sq. ft.		
	Hangar	Workshops	Offices, etc.
	s d	s d	s d
Preliminaries and insurances	2 8	2 3	2 9
Contingencies			
Work below ground floor level	11 10½	15 10	9 3½
Bases to hangar columns, rear and side, pad foundations Three front main columns rod grillage reinforced concrete. Bases to single and 2-storey offices and workshops: 4-ft. × 3-ft. × 2-ft. 6-in. deep pad foundations. Hangar slab, 11-in. concrete in two layers, staggered joints, on 3-in. concrete blinding. Apron, 5-in. prestressed concrete on 2 layers waxed paper on 3-in. blinding concrete, purely to provide a working platform. This would not have been required if the condition of the subsoil had been better. Annexes slab, 6-in. concrete on 6-in. hardcore.			
Frame or load bearing element	20 9½	9 7½	16 5½
Hangar, precast prestressed concrete roof frame supported on prestressed concrete and r.c. columns. Offices and annexes: the construction is completely independent of the hangar, although the module is related, and 10-in. × 6-in. precast columns and 9-in. × 6-in. roof beams are at 6-ft. 8-in. centres. Columns are corbelled to take reinforced concrete first floor units spanning 20 ft. × 6 ft. 8 in. These are connected to the columns by dowels on the corbels and are trough shaped with rib depths of 16 in. and a panel thickness of 2½ in. Spans of annexe buildings: 2-storey offices, 20 ft.; north-east wing, double 20 ft. Single-storey workshops to south, 26 ft. 8 in.; to east, 28 ft. 3 in.			
External walls and glazing	5 0¼	9 3	8 7
Aluminium frames with thermal glass infill panels, top hung and pivot windows. Small panels of 11-in. cavity brick.			
Internal walls	—	1 9	2 4¾
Lightweight concrete block, plastered (render and set) in offices.			
Partitions	—	1 7½	5¼
Demountable softwood frames with chipboard and glass infilling for workshops and offices, etc.			
Roof coverings	3 2½	4 11	2 9¼
2-in. compressed strawslabs fixed to beams with clips or screwed to blocks, finished with three layers of felt and white lightweight chippings. Cost includes rainwater pipes.			
Lantern lights	4¾	—	—
Finishes	6¼	6¾	12 10
Walls generally 2 coats emulsion. Ceilings, 2 coats washable water paint (sprayed on). Woodwork, 2 coats gloss. Radiators and pipe work, 2 coats heat-resisting gloss. Ceilings in offices sprayed with asbestos for sound absorption. Floors: hangar and workshops, monolithic grano; offices, cork tiles; canteen, plastic tiles.			
Doors, external and internal	13 10½	4 4¾	3 0
Hangar doors and overhead steelwork.			
W.c. partitions and doors	—	3	2½
Aluminium faced ply panels, chosen for lightness, thinness, durability and lack of maintenance.			
Fittings	—	—	1 0
Locker-cum-partition units to offices.			
Gantries	1 6½	—	—
Two gantries slung from bottom booms of secondary beams. Capacities, 1 ton and ½ ton.			

analysis

Element	Cost per sq. ft.		
	Hangar	Workshops	Offices etc.
	s d	s d	s d
Internal plumbing and sanitary services	—	1 7¾	1 11½
Gas services	—	—	8½
Electrical installation Conduit and copper sheathed	3 9½	4 0	2 5¼
Heating and hot water Medium pressure heating system from oil-fired boiler of 4,000,000 B.Th.U./hr. capacity, feeding recirculated warm air heat exchangers in hangar and radiators in offices. Domestic hot water service from calorifier. The boiler is a package type which requires no chimney, an extremely useful attribute.	3 6	4 10¼	10 0¾
Kitchen ventilation	—	—	1 9¼
Drainage	1 11½	3 3	2 11
Decorations	7½	11¼	3 2¼
Propeller and wheel pits in hangar.	1 8	—	—
Total costs per sq. ft.	71 5	65 1¾	82 8¾

COST COMMENTS

The breakdown of this scheme into the three main functional units must obviously be arbitrary, For example, a split must be made between foundations and structural frame where the workshop occurs on the ground floor of the two-storey office block. However, the result has given a fair guide of the distribution of costs.

Hangar: The main costs have gone into foundations, power-operated hangar doors and frame. If detailed comparison were possible with similar buildings built in recent years, the main saving would undoubtedly show up in the frame. Costs at " Transair " have been kept to a minimum by the use of simple repetitive precast components capable of being stressed on the ground and hoisted into position (see description in text).

Workshop: The workshop, at 65s. 1¾d. per sq. ft., is an integral part of a single project and uses, for example, a frame and external cladding quite different from what might be chosen for a detached building of a similar function. Cost comparisons with others are therefore invidious. With a higher than normal water table and a lower than normal soil-bearing capacity, the workshop foundation costs seem at first glance to be high (15s. 10d. per sq. ft. floor area), but this is probably due to the close spacing of the column bases (6 ft. 8 in. centres).

Offices, etc.: The money spent on the office block has gone mainly on the frame, finishes and heating. The frame element (16s. 5¼d. per sq. ft. floor area) includes columns, roof beams and suspended floor units. No heating standards are given. Costs include a proportion of the package type boiler—costs which can be offset by the lack of a boiler chimney and the aesthetic advantages that follow. Some idea of the standard of finish put on the office block is indicated by the cost of finishes and decorations (16s. 0¼d. per sq. ft. floor area).

Apron: The cost of the apron as shown is equivalent to a unit price of 5s. 1d. per sq. ft.

Generally: The total cost to the client must be assessed against value for money. With good-looking offices, efficient workshops, first-class hangar and external maintenance kept to a minimum, the client would appear to have been given just that.

CONTRACTORS

General contractors: Sir Alfred McAlpine & Son Ltd. *Subcontractors: Cork and thermoplastic floor tiles:* Armstrong Cork Co. Ltd. *Electrical installation:* Belshaw & Co. Ltd. *Kitchen equipment and ventilation:* Benham & Sons Ltd. *Roller shutters:* G. Brady & Co. Ltd. *Gantries:* British Electrical Repairs Ltd. *Hangar doors:* Esavian Ltd. *Lavatory partitions:* Flexo Plywood Industries Ltd. *Terrazzo floors:* Jaconello Ltd. *Granolithic floor finish:* Johnson Floor Co. Ltd. *Precast concrete structure:* London Ferro-Concrete Co. Ltd. *Roofing:* Macartney Ltd. *Aluminium windows and patent glazing:* Mellowes & Co. Ltd. *Heating:* Saunders & Taylor Ltd. *Mosaic tiles:* Dennis M. Williams Ltd. *Hydraulic floor lifts:* Weaver Manufacturing and Engineering Co. Ltd. *Asbestos spray ceilings:* Turners Asbestos Cement Co. Ltd. *Joinery :* Pochins (Manchester) Ltd. *Glazing:* Wottons (Croydon) Ltd. *Painting:* Arnold Sharrocks Ltd. *Plumbing:* Henry Tattersall Ltd. *Tiling:* Allan & Cairns Ltd. *Plastering:* Mann Bros. Ltd. *Road surfacing:* Tarpaving and Tarmacadam Ltd. *Roof decking:* Stramit Boards Ltd. *Facing bricks:* Sydney A. Hunter Ltd. *Partition blocks:* Thermalite Ltd. *Fair-face partition blocks:* Vitreous Concrete Co. Ltd. *Double glazing and infill panels:* Plyglass Ltd. *Steel lattice beams:* Sommerfelds Ltd. *Paint:* Hadfields (Merton) Ltd. *Plastic-faced window boards:* Berite Ltd. *Sanitary fittings:* John Bolding & Sons Ltd. *Door furniture:* Alfred G. Roberts Ltd. *Light fittings:* Crompton Parkinson; Strong & Co.; Atlas.

working detail

WINDOWS: 68

WINDOW: SCHOOL AT AMERSHAM, BUCKS.

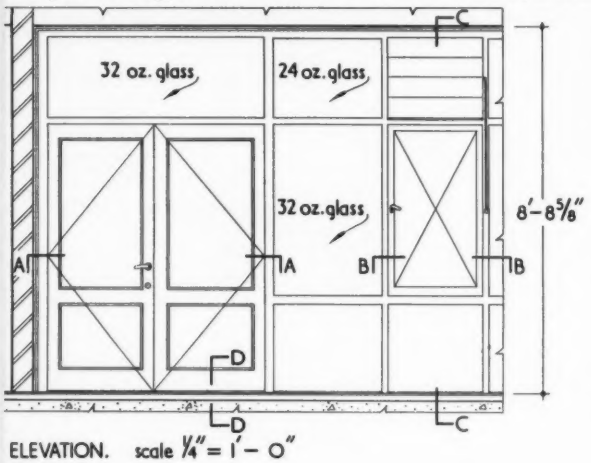
Chief Architect's Department, M.O.E., in collaboration with the County Architect, Buckinghamshire County Council; J. S. B. Coatman, Mary B. Crowley, David L. Medd and C. E. D. Wooster, architects-in-charge

This timber detailing has been designed to make easy junctions with traditional loadbearing structure. Note the use of glass louvres to give maximum ventilation areas, while avoiding the obstruction of wood frames, and the splayed reveal to catch the light and provide a gradation of light between the sky and interior surfaces.

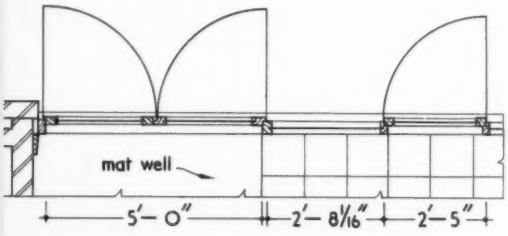
working detail

WINDOW: SCHOOL AT AMERSHAM, BUCKS.

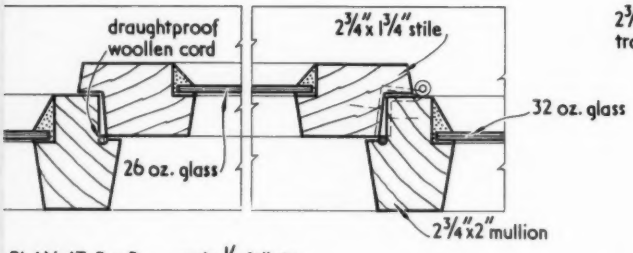
Chief Architect's Department, M.O.E., in collaboration with the County Architect, Buckinghamshire County Council; J. S. B. Coatman, Mary B. Crowley, David L. Medd and C. E. D. Wooster, architects-in-charge



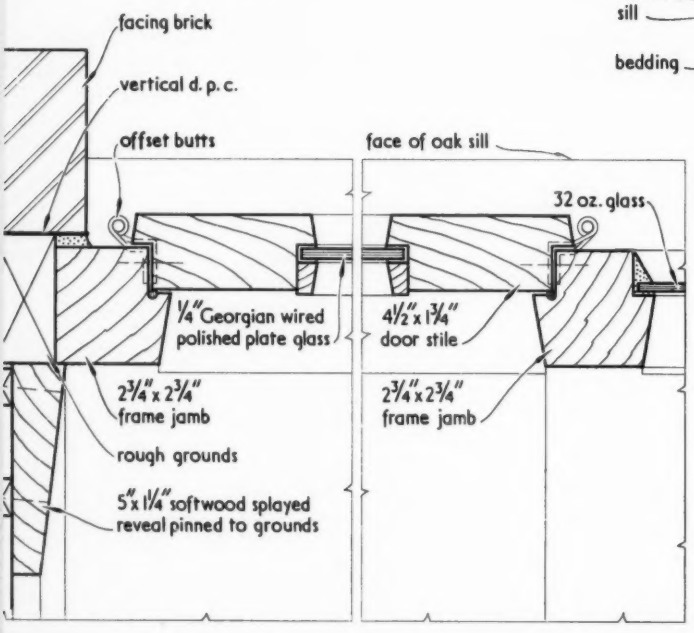
ELEVATION. scale ¼" = 1'– 0"



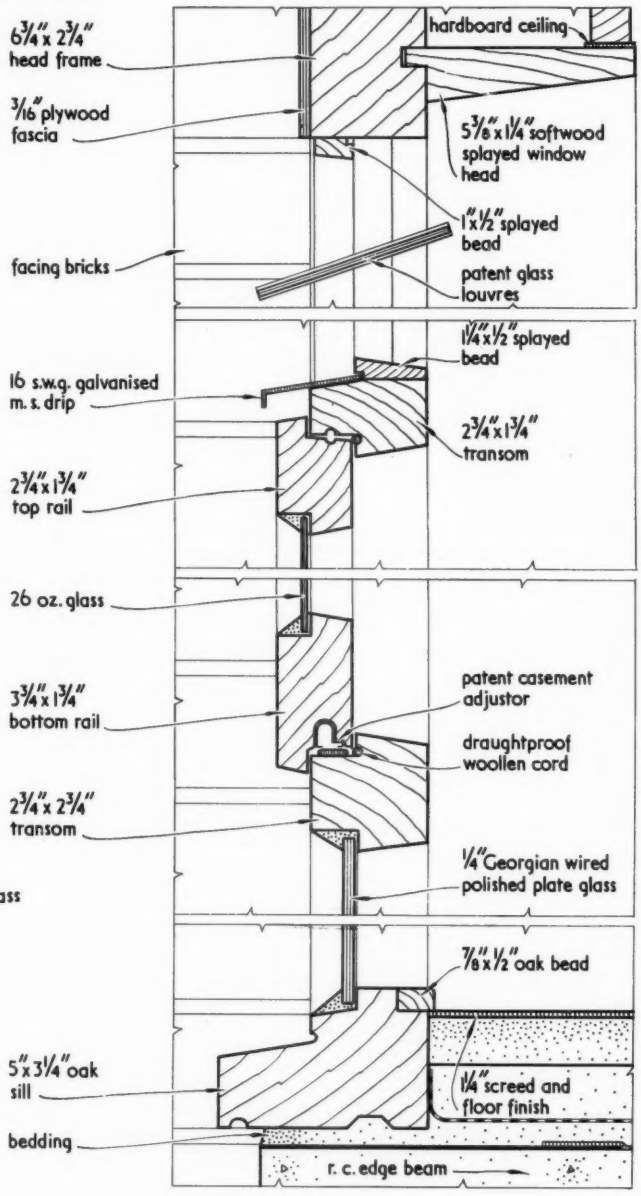
PLAN. scale ¼" = 1'– 0"



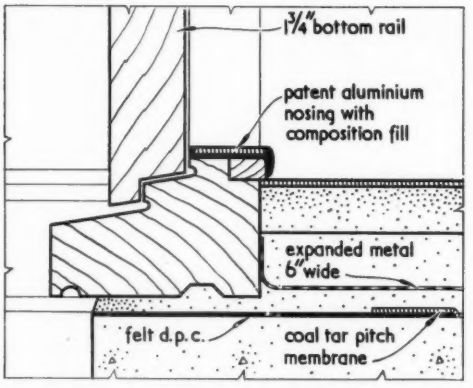
PLAN AT B – B. scale ¼ full size


facing brick
vertical d. p. c.
offset butts
face of oak sill
32 oz. glass
¼" Georgian wired polished plate glass
4½" x 1¾" door stile
2¾" x 2¾" frame jamb
2¾" x 2¾" frame jamb
rough grounds
5" x 1¼" softwood splayed reveal pinned to grounds

PLAN AT A – A. scale ¼ full size


6¾" x 2¾" head frame
hardboard ceiling
⅜" plywood fascia
5⅜" x 1¼" softwood splayed window head
1" x ½" splayed bead
facing bricks
patent glass louvres
1¼" x ½" splayed bead
16 s.w.g. galvanised m. s. drip
2¾" x 1¾" transom
2¾" x 1¾" top rail
26 oz. glass
patent casement adjustor
3¾" x 1¾" bottom rail
draughtproof woollen cord
2¾" x 2¾" transom
¼" Georgian wired polished plate glass
⅞" x ½" oak bead
5" x 3¼" oak sill
1¼" screed and floor finish
bedding
r. c. edge beam

SECTION C – C. scale ¼ full size



SECTION D – D. scale ¼ full size

working detail

WATER SUPPLY AND SANITATION: 11

FOOTBATH: SCHOOL AT AMERSHAM, BUCKS.

Chief Architect's Department, M.O.E., in collaboration with the County Architect, Buckinghamshire County Council; J. S. B. Coatman, Mary B. Crowley, David L. Medd and C. E. D. Wooster, architects-in-charge

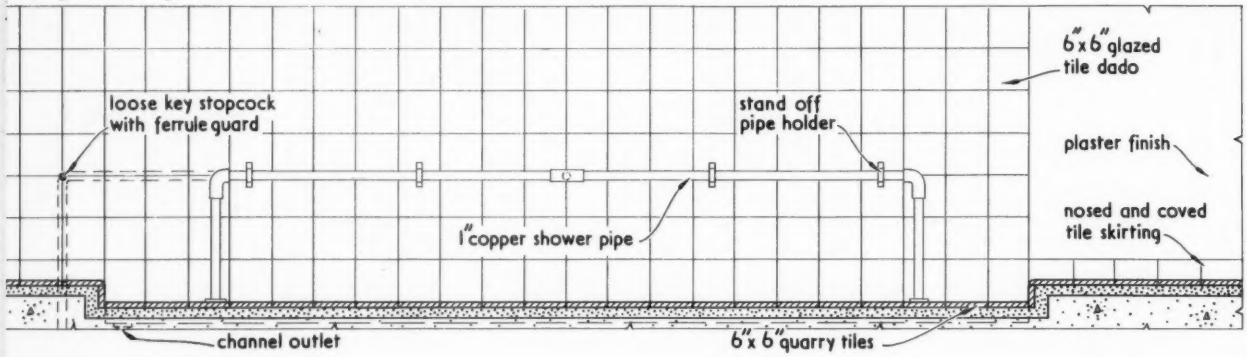
This very simple piece of equipment has been devised to meet the needs of children who play games with bare feet.

working detail

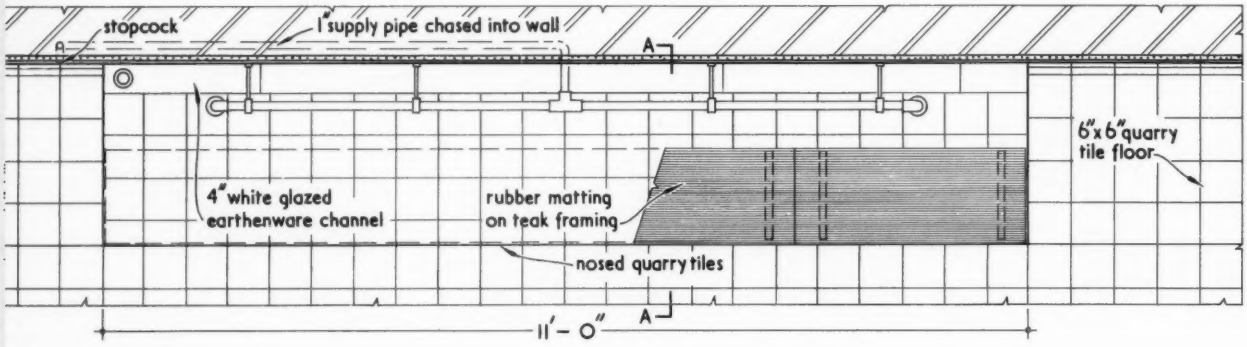
WATER SUPPLY AND SANITATION: 11

FOOTBATH: SCHOOL AT AMERSHAM, BUCKS.

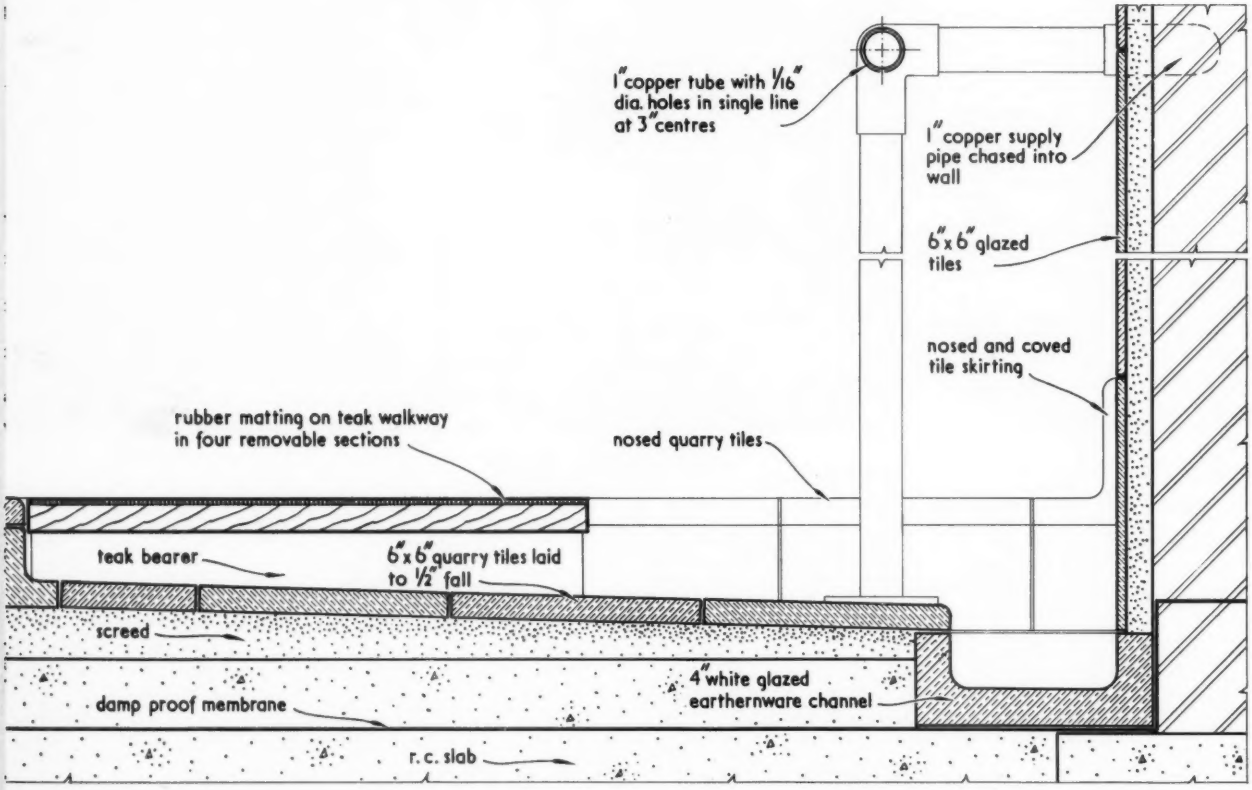
Chief Architect's Department, M.O.E., in collaboration with the County Architect, Buckinghamshire County Council; J. S. B. Coatman, Mary B. Crowley, David L. Medd and C. E. D. Wooster, architects-in-charge



ELEVATION. scale ½" = 1'–0"



PLAN. scale ½" = 1'–0"


1" copper tube with 1/16" dia. holes in single line at 3" centres
1" copper supply pipe chased into wall
6"x6" glazed tiles
nosed and coved tile skirting
rubber matting on teak walkway in four removable sections
nosed quarry tiles
teak bearer
6"x6" quarry tiles laid to ½" fall
screed
4" white glazed earthenware channel
damp proof membrane
r.c. slab

SECTION A–A scale ¼ full size

The steps of 1,000,000 feet...

Over these steps in the entrance hall of the Buxton Pavilion, more than a million feet have trodden their happy ways to dances, concerts, plays and many other occasions since 1952. More than a million feet have known the firm, reassuring grip of the Ferodo non-slip stairtreads, and as you can see, they still look almost new.

FERODO non-slip stairtreads

* non-slip moulded material in red, white, blue, green, black, brown or grey, or brown fabric treads.
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* a range of shapes adaptable to every type of stair nosing.
* simply fitted to any type of stair by concealed screws fitted through ready-drilled holes.
* supplied cut to fit, in any length.

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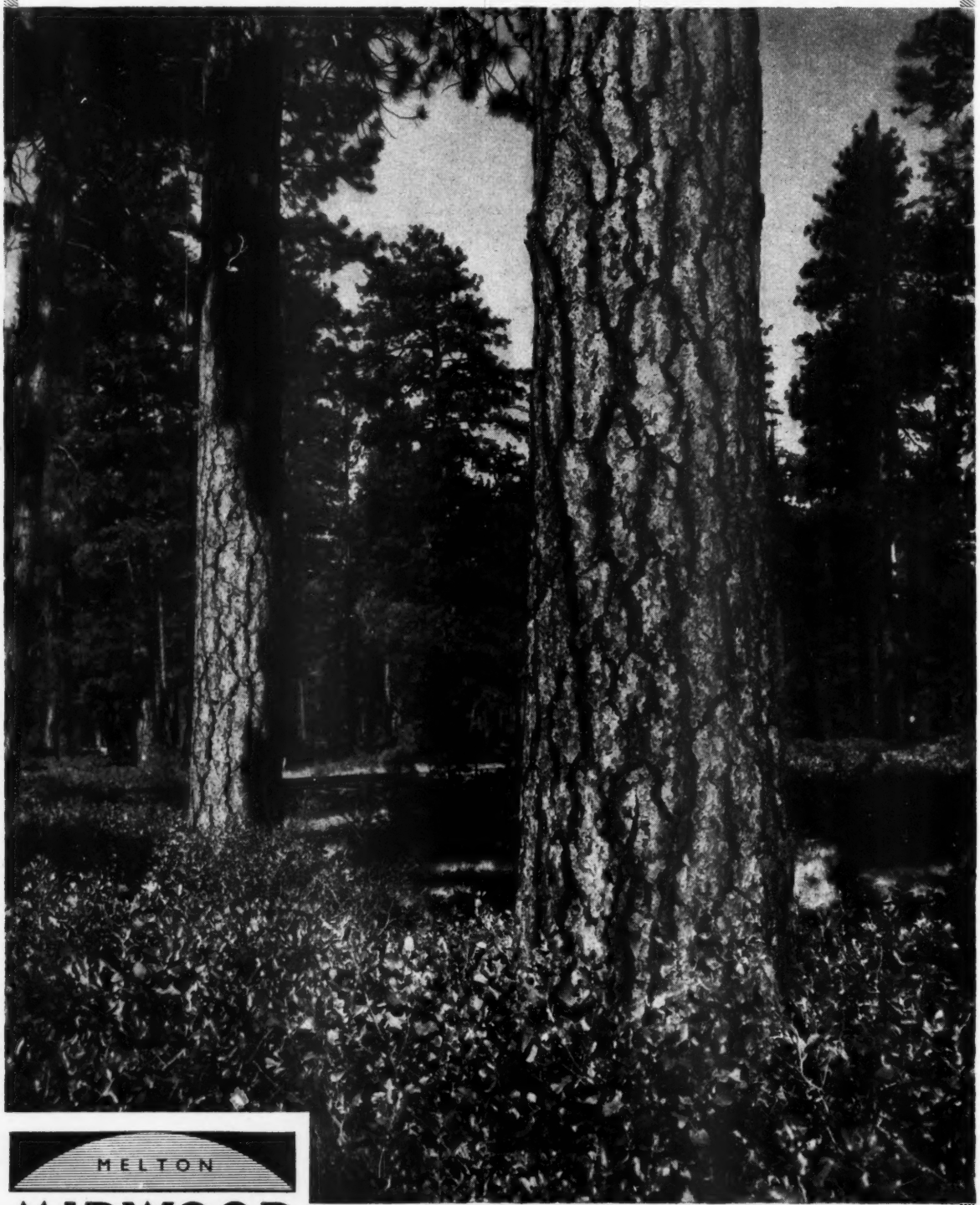

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THE MIDLAND WOODWORKING CO LTD MELTON MOWBRAY

MW 20

FIRE STATION AT ARMAGH

Armagh's new fire station, designed by James Munce, of Munce & Kennedy's, makes use of some fine stone, taken from a wall which was standing on the site, redressed and built into wall panels. These panels of traditional stonework have been combined with a two-storey high "window" of clear and opaque coloured glass, and roughcast walling. First floor and roof are prestressed concrete, giving uninterrupted floor space for machines on the ground floor and for a recreation space above.

Announcements

PROFESSIONAL

H. Werner Rosenthal, F.R.I.B.A., would like trade literature and other information to be sent direct to his Buckinghamshire office at "Greystead," Quill Hall Lane, Amersham, Bucks. Telephone Amersham 894. Representatives by appointment only.

Holdsworth, Son & Partners, Chartered Surveyors, have dissolved their partnership and two partnerships have now been formed. A. P. Holdsworth and W. Macfarlane, F/F.R.I.C.S., will practice at the present Hull address, 255, Beverley Road, Hull, and at Liverpool. R. G. Holdsworth and R. G. Cousens, A/A.R.I.C.S., will practice at 49, Spring Hill Road, Sheffield, 10.

The School of Architecture and Building, Oxford, has moved to the new building of the College of Technology, Art and Commerce at Headington Road, Oxford. The Technical Reference Library and the Materials Room are being reorganized and the Lecturer in Construction, R. E. Owen, Dip. Arch., A.R.I.B.A., would be glad to receive samples and trade catalogues, preferably in duplicate.

Markham Ashberry & Associates of Chicago—Store Engineers and Designers—are undertaking a contract in the United Kingdom and would be pleased to receive Trade Literature and Catalogues for Extruded Metals, Drawn Metals, Plywoods, Lighting, Ceramic Tiles, and Steel, etc. This should be sent to 261, Cricklewood Lane, N.W.2. (No representative until requested).

TRADE

Drake & Gorham Ltd., have acquired new premises for the parent company at 68, St. Ann Street, Salisbury (telephone Salisbury 6544). Correspondence for the parent company, H. M. Drake, W. Parker, and W. B. M. Drake, should in future be addressed to the Salisbury office. Drake & Gorham (Contractors) Ltd., of London, Cardiff and Man-

CONJURING WITH SPACE!

The liberties you can take with space are endless when you enlist the help of the ESAVIAN principle of partitioning. The doors and partitions slide quickly and smoothly, causing no obstructions, and can be made in the most attractive and appropriate materials for the job. They are as much at home in houses, schools, or offices as they are in factories, aircraft hangars or ships.

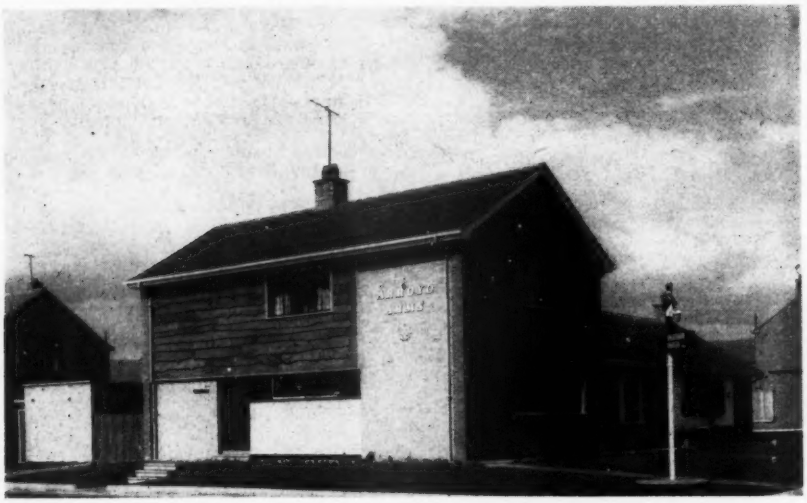
If you have any space partitioning problems which you think the ESAVIAN principle might be able to solve, may we suggest you get in touch with us?

These two sound-deadened Partitions (Type 700) in pencil-striped sapele mahogany show the flexible use of space at the Students Union Building Council Chamber, University of London. Architects: Adams, Holden & Pearson, F.F.R.I.B.A.

Esavian Ltd., Esavian Works, Stevenage, Herts. Tel.: Stevenage 500
Esavian Works, Carfin, Lanarkshire. Tel.: Holytown 391.

THE ESAVIAN PRINCIPLE
FOR FOLDING AND SLIDING DOORS, WINDOWS, PARTITIONS AND SCREENS

NEW STATE PUB AT CARLISLE



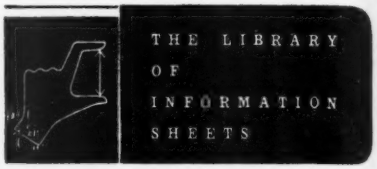
The Arroyo Arms, Harraby, Carlisle, is a new "State Management Inn" on the corner of a local authority neighbourhood unit, designed by the chief architect, H. A. Matawers (architect-in-charge, R. A. Greaves; architectural assistant M. A. Brooks). To harmonize with the surrounding development, the inn is domestic in scale, with simple external elevations, made inviting by the use of warmly coloured materials. Westmorland slates cover the roof, and mixed buff rustic facing bricks, used generally, contrast with dark rustic facings on the gable ends. The upper part of the west front is finished with weather boarding, framed with a white-painted projecting member. General contractor: John Laing & Son Ltd.

chester, will now expand into accommodation vacated by the parent company at 36, Grosvenor Gardens, S.W.1. (Telephone Sloane 0121).

Corrections

In the JOURNAL for September 4, owing to a printer's error, the cost of "work below ground floor level" in the cost analysis of Woolton County Primary School, Liverpool, was given as 7s. 1d. instead of 7s. 10d.

In the JOURNAL for October 30, the general contractors for Flatted Factories in Birmingham, were incorrectly given. The contractor was Turriff Construction Corporation Limited.



15.R1. *REFERENCE BACK*

Readers are asked to note that under the heading "Sizes and Weights" on the reverse of the Sheet the weights for ¼ in. and ⅜ in. sheet were incorrectly given as 4½ lb. and 6 lb. instead of 3½ lb. and 4½ lb., respectively.

44.J4 *REFERENCE BACK*

Readers are asked to note that knobset types 9105 and 9106 are not yet in production. Similarly, aluminium knobs are not yet available and the manufacturers recommend the satin-chrome finish as an alternative.

Transair Limited
GATWICK

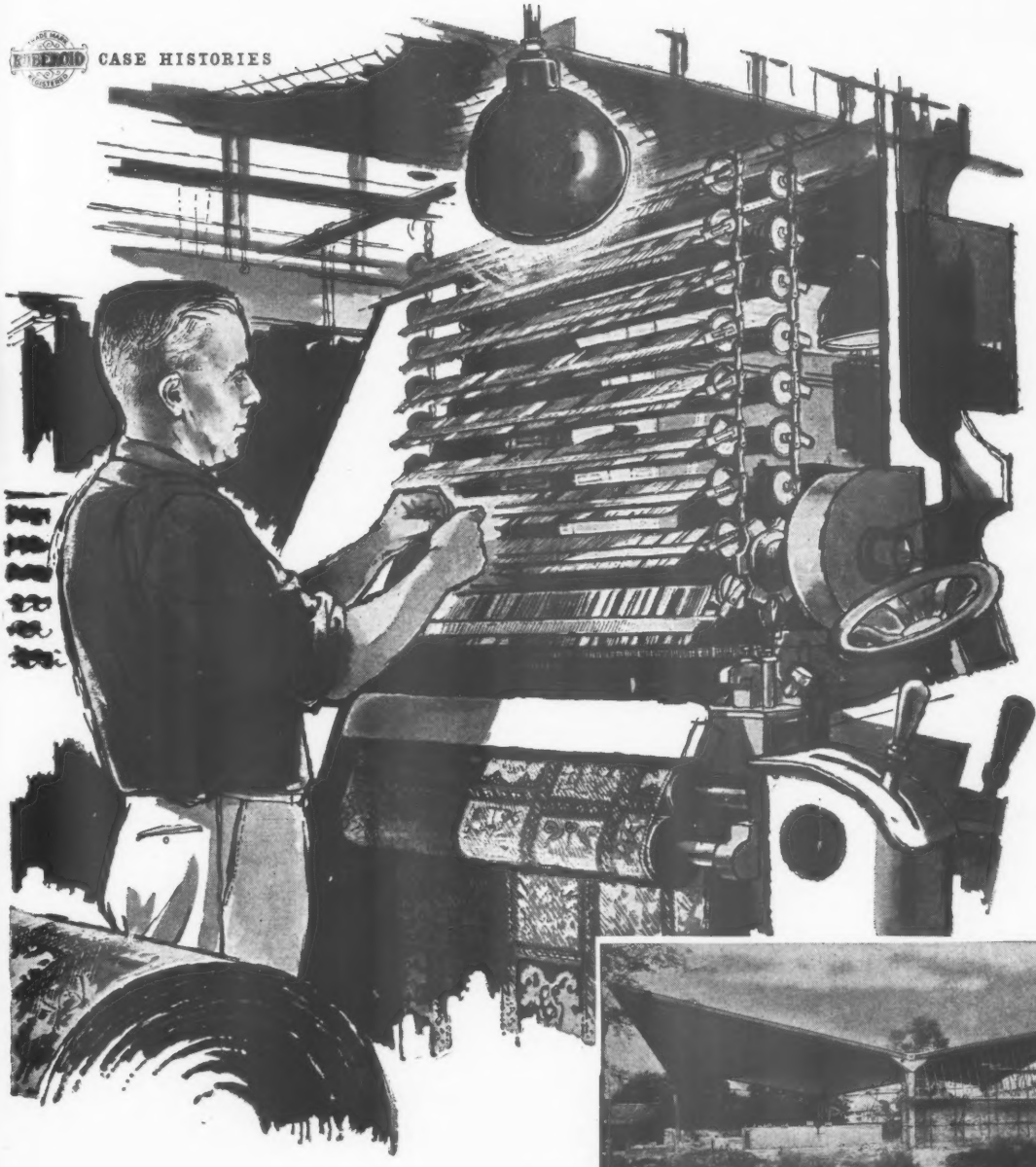
Architects:
Clive Pascall, Esq., A.A. Dipl. F.R.I.B.A.
& Peter Watson, Esq., Dip. Arch. A.R.I.B.A.

General Contractors:
Sir Alfred McAlpine & Sons Limited.

Vertical Alumell Patent Glazing to the Hangar and Aluminium Windows and Doors to the office supplied and fixed by :

MELLOWES & CO. LIMITED
SHEFFIELD • LONDON • OLDHAM

RUBEROID CASE HISTORIES



The roof consists of four panels of hyperbolic paraboloid shells, each 57 ft. 5 in. square, supported independently by a concrete column at the mid-point of each side and weatherproofed with Ruberoid Built-Up Roofing.

Roll out the carpet for hyperbolic paraboloid!

Much architectural interest is being focused on the unusual roof designed by Architect Mr. Robert Townsend, F.R.I.B.A, for The Wilton Royal Carpet Factory Limited, using a Ruberoid Built-Up Roof with a mineral surfaced Capsheet. First roof of its kind to be erected in this country, first and only roof ever to be built in timber on the multiple hyperbolic parabola principle, and a great triumph for its adventurous designer, for using a basically simple geometrical principle to such good effect.

RUBEROID

C329c THE RUBEROID COMPANY LIMITED, 343 COMMONWEALTH HOUSE, 1-19 NEW OXFORD STREET, LONDON WC1

The new Transair Hangar at Gatwick Airport

A striking example of modern construction

The Transair Hangar is a noteworthy feature of the new Gatwick Airport. With its advanced design and construction, it fits in well with the up-to-the-minute scheme of things at this great new airport. With a floor space of over 30,000 square feet, it is a striking achievement. We are proud to have been main contractors for its construction—as we were for the runway, aprons and other works on the new Airport itself.

* *Architects for the new Transair Headquarters were Clive Pascall and Peter Watson.*

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AND SON LTD.

Sir Alfred McALPINE

BUILDING AND CIVIL ENGINEERING CONTRACTORS · HOOTON CHESHIRE
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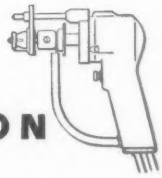
That's the ticket

Look closely at the railway coach you ride in and you will probably find that it features Crompton Parkinson stud welding. Examine the signal gantries it passes and you will certainly come across stud welding again. And, if you were to delve really deeply into the matter, it is more than likely that you would discover it once more on the pit-props in the mine that provided the coal required to provide the electricity which drives the train.

What C.P. stud welding does for the railways it does for industry as a whole — reduces costs, simplifies designs and speeds production. It's a sure way to greater productivity — and a permanent way at that! Do you know all about the advantages of stud welding? If not, we shall be glad to put you on the right lines.

Crompton Parkinson
ELECTRICAL EQUIPMENT
(STUD WELDING) LIMITED

1–3 BRIXTON ROAD, LONDON, S.W.9. Telephone: Reliance 7676

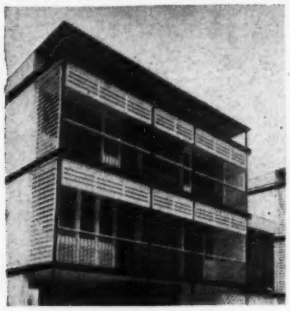


STUD WELDING STEPS UP PRODUCTION

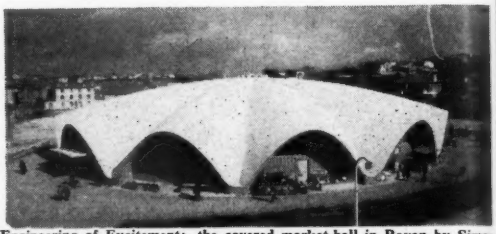
ar

NOVEMBER

Sun-screens in Apapa; housing for the Nigerian Ports authority—this, and other recent work in West Africa by Architects' Co-Partnership will be described and illustrated in the October issue.



Toronto Modern: the central gallery of the Parkin House, Toronto, one of a group of buildings by the outstanding Canadian design office, John B. Parkin Associates, illustrated in this issue.

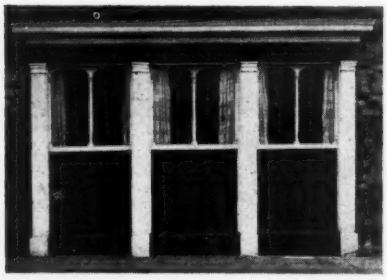


Engineering of Excitement; the covered market-hall in Royan by Simon and Morisseau, one of the buildings discussed by Robin Boyd in his article on the impact of new structural shapes on the architectural imagination.

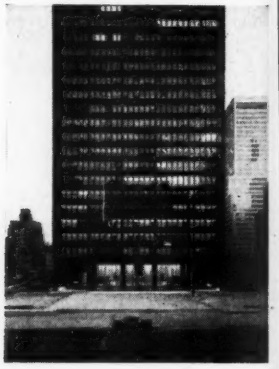
DECEMBER

Seagram completed; and dwarfing even the Cadillac in foreground, the glass and bronze Seagram Building by Philip Johnson and Mies van der Rohe will be fully discussed and—tentatively—evaluated.

Workshop Annexe: new stores, paint shops, etc., for the Old Vic, ingeniously packed under some awkward day-lighting angles by Lyons Israel and Ellis, and fully illustrated in this issue.

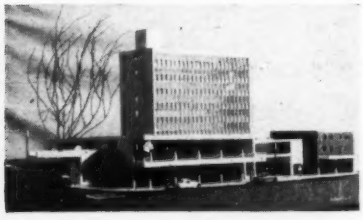


Pub Front: frame and fill on the facade of the Crown and Mitre, King's Lynn: one of the illustrations to an assessment of the aesthetic and functional aspects of pub exteriors and their future.



JANUARY

Special Preview Issue



New Town Multi-storey; an office block for the town centre of Hemel Hempstead, designed by H. K. Ablett, chief architect to the Development Corporation.

High Gorbals: a redevelopment area in Glasgow, by Robert Matthew and Johnson Marshall, one of a number of housing-schemes pre-viewed in this issue.

Northern Methodist: a projected church in Fulwell, Co. Durham, designed by S. W. Milburn and Partners for a Methodist congregation.

The Architectural Review's new standard binding, with alternate years bound in black and white, and alternate volumes initialled A and R, makes easier the identification of individual volumes, and their proper replacement on the shelf. The binding is buckram, and the price of binding per volume is 25s. Copies to be bound should be addressed, with the appropriate index, direct to the Architectural Press warehouse, Abbey House, 8 Victoria Street, London, S.W.1.

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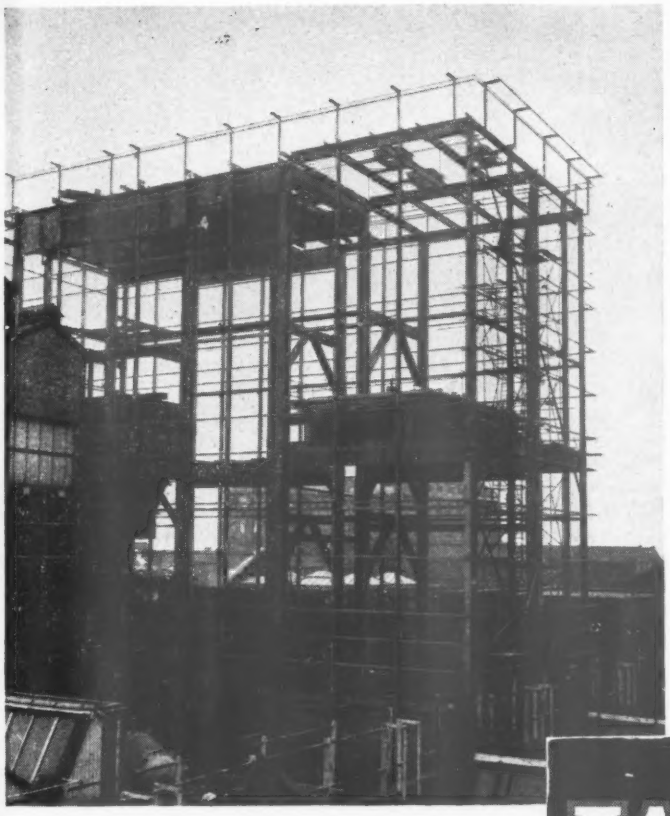

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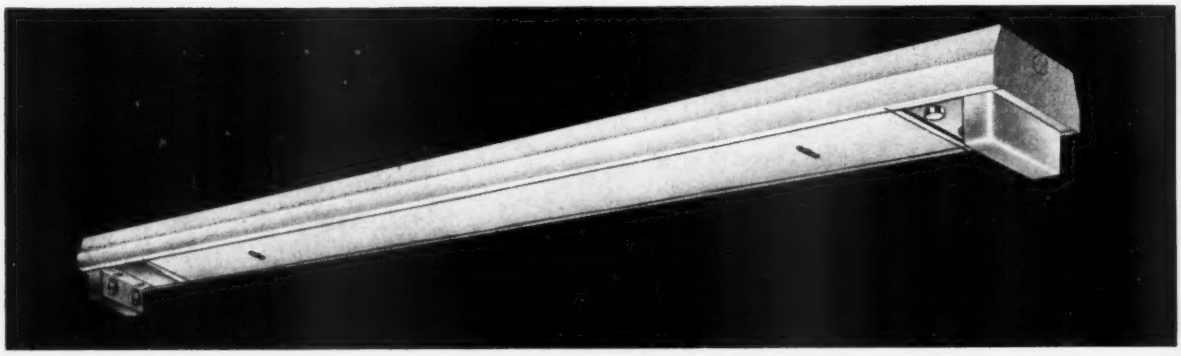

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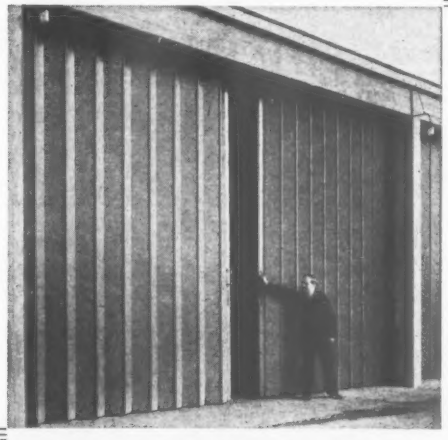

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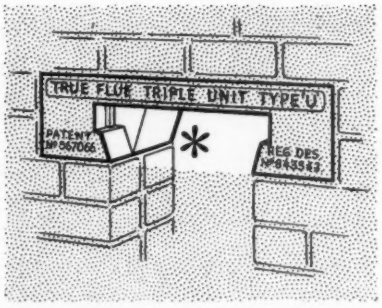

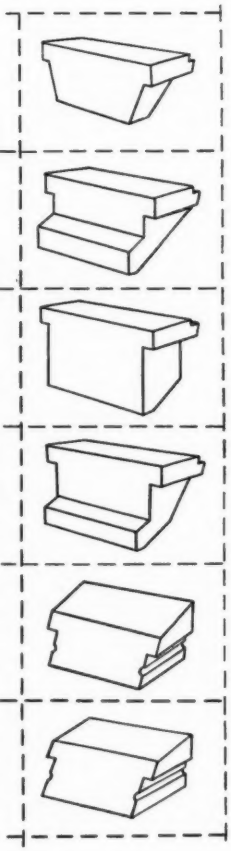

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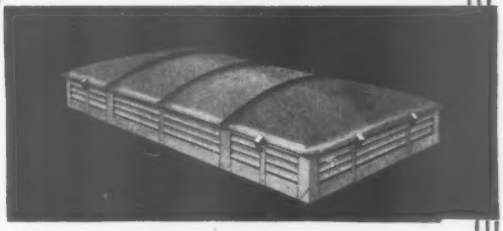

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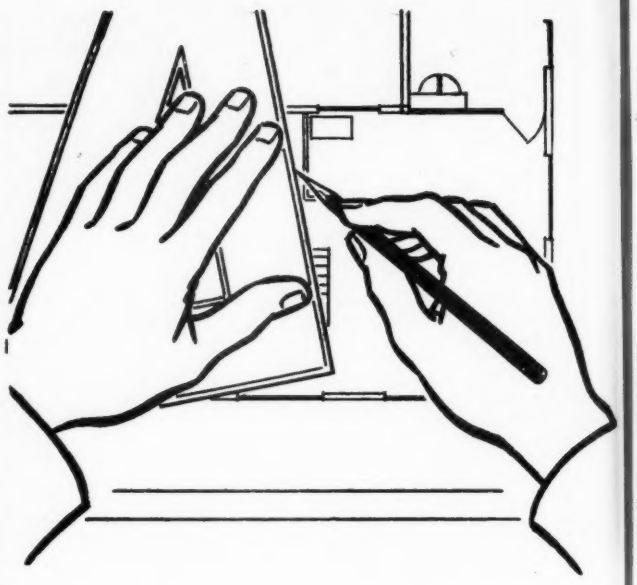

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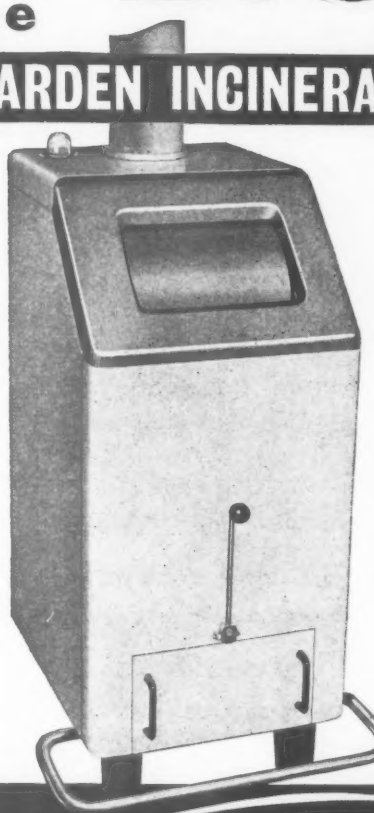

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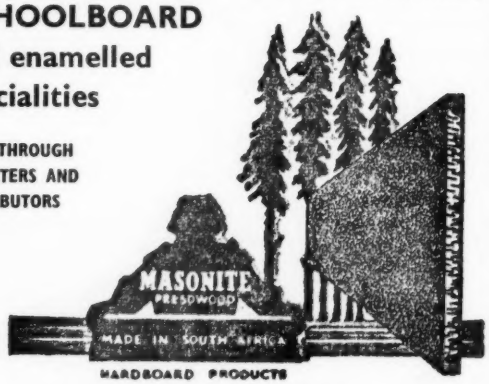

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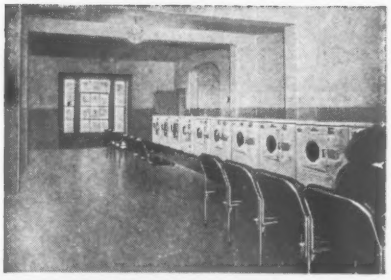

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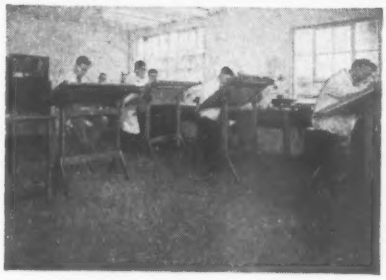

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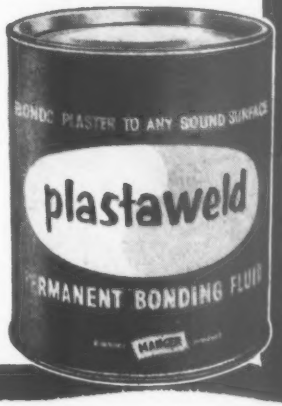

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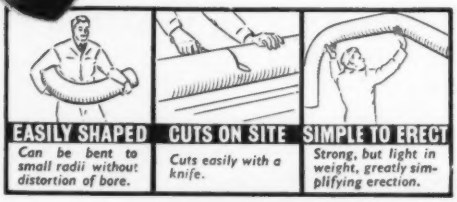
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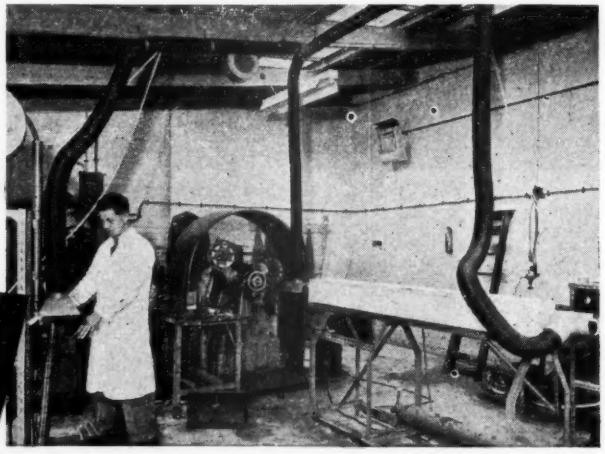

TEMPORARY AND PERMANENT DUCTING—TOPEX Pliable Ducting can be quickly erected in any experimental and development shop as this photograph clearly indicates, and can be quickly dismantled and stored for the next job. It is just as easy, and costs no more to erect permanent TOPEX Pliable Ducting for domestic and industrial ventilation schemes.

Detailed pre-planning and prefabrication are unnecessary with KOPEX Pliable Ducting. It can be cut, bent by hand—even to small radii—and fixed to conform with the most intricate layout on site. Jointing is reduced to a minimum because Kopex can be supplied in continuous lengths.

Good heat insulation properties are a special feature of Kopex composite paper and metal ducting, making it ideal for heating and ventilation installations. It is also particularly suited for dust and fume extraction. Grades are available for all types of installations, high or low temperatures, in sizes up to 7½in. I/D in all metal, and metal and paper.

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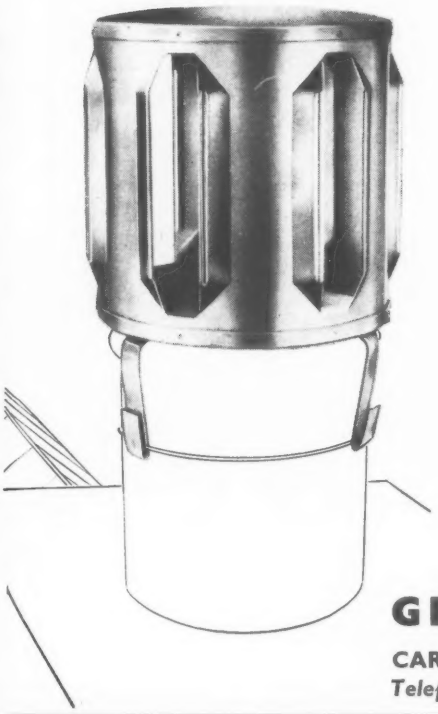
Greenwood Dual-Purpose Cowl



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Intensive research into the problems raised by downdraught and smoky chimneys lies behind the design of the Greenwood Dual-Purpose Chimney Cowl.

★ **DUAL-PURPOSE**
The circular construction prevents wide fluctuation in updraught by constant changes in wind direction and allows a gentle form of positive ventilation in the room over which it is fitted.

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Aerodynamically designed to harness wind currents of varying strength and direction, the Greenwood Cowl has proved its efficiency after being rigorously tested under severe practical conditions.

★ **GOOD-LOOKING**
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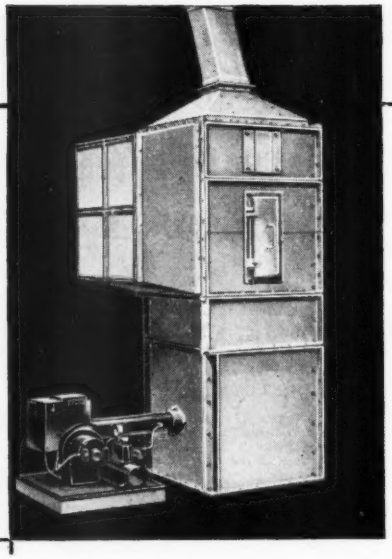

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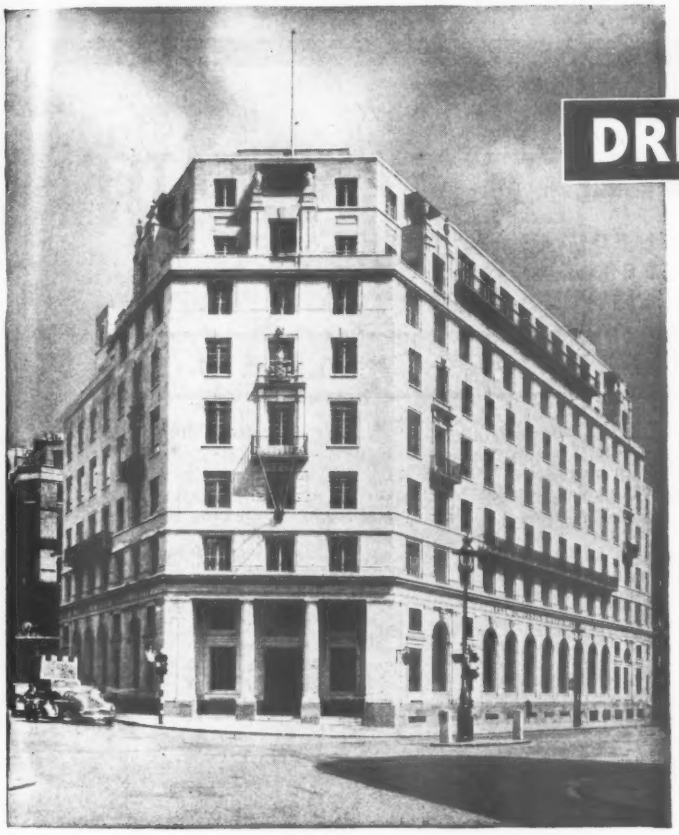

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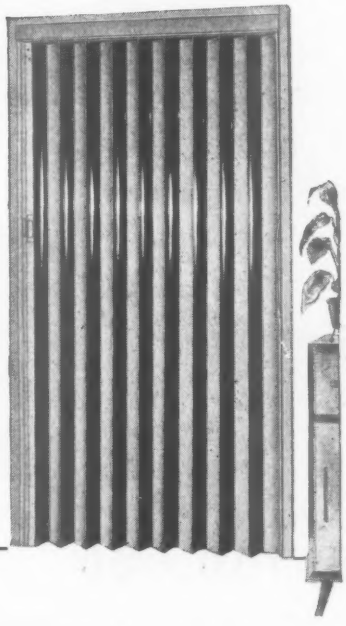

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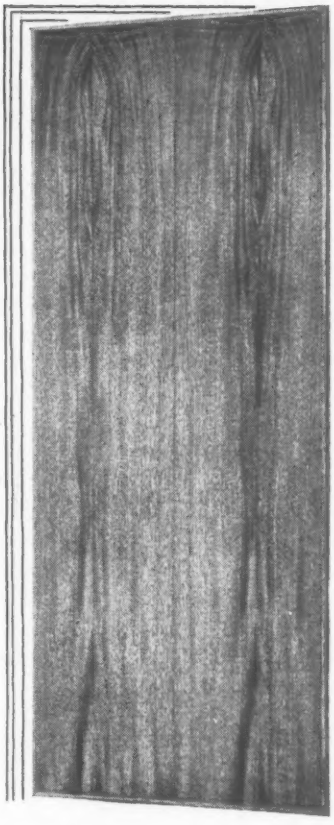

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. . . a beauty more than skin deep

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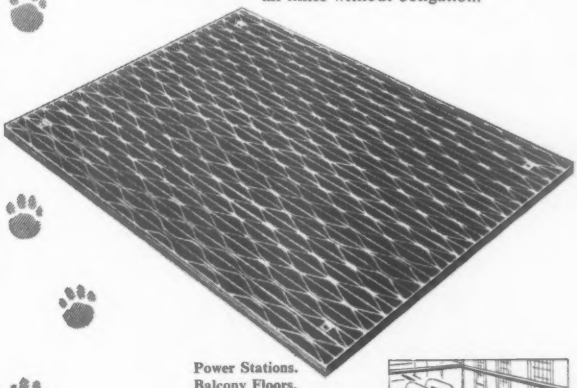

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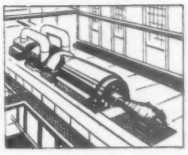

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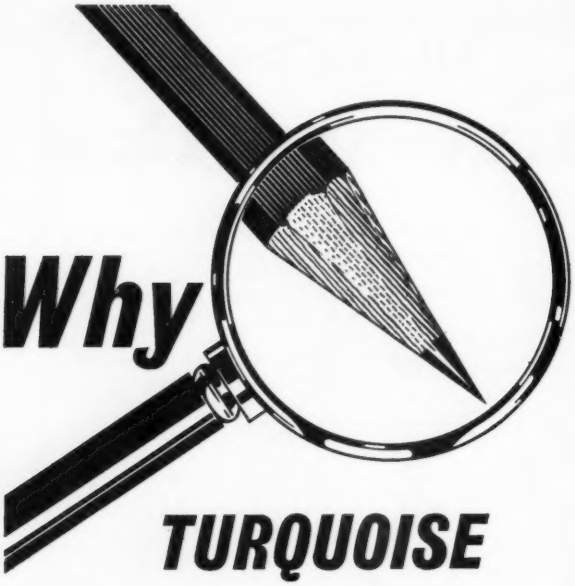

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The lead in Turquoise pencils is something quite special. It is prepared from 100% electronic graphite, which after being cleansed of all impurities is spun to particles of 1/25,000 of an inch, then blended with clay and steeped in hot waxes.
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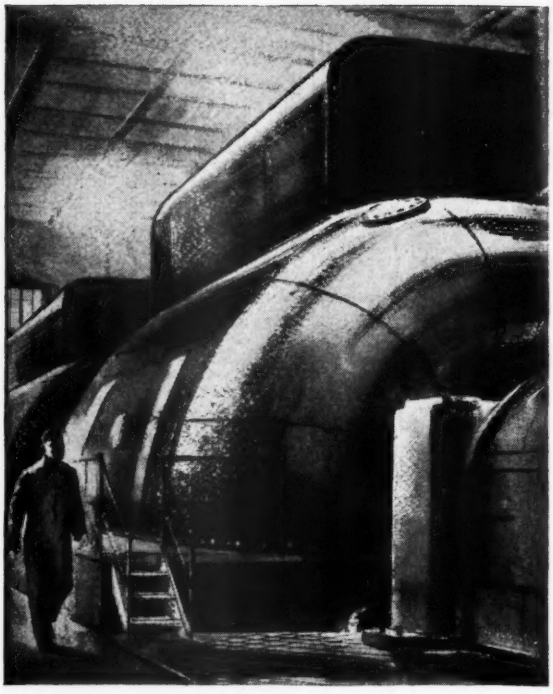

The world's largest Generators will help to fill the demand for still more power

The development of nuclear energy for generating electricity is still front-page news. Less publicised, though no less outstanding, are new developments in "conventional" generating plant. The turbo-alternator shown here is a 550,000 kilowatt unit – twice the capacity of the next largest on order for the Central Electricity Generating Board. It has been designed for the projected new power station at Thorpe Marsh. For Blythe 'B', another new station, 275,000 kilowatt in-line units are on order. They will be powered by steam at 2,350 lb. per sq. in. and 1,050°F, with reheat to 1,000°F.

Nuclear power will play an important part in meeting the ever-increasing demand for electricity. Work is now in progress on the first three nuclear power stations, at Bradwell, Berkeley and Hinkley Point. By 1966/7 some 5 to 6 million kilowatts of nuclear-generated electric power will be available.

Though these projects will not be completed for some time, the Central Electricity Generating Board plays an important part in today's fight against inflation. Power stations are being built at a cost no greater than in 1948 – £50 per kilowatt installed. And, although the output of the industry has doubled since 1948, the increase in manpower is only about one-third.

By providing today for the power we shall need in years to come, the Central Electricity Generating Board is building a secure foundation for our future prosperity.

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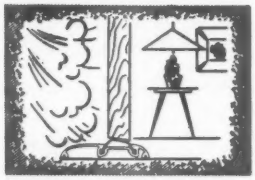
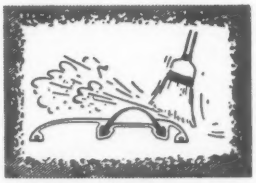
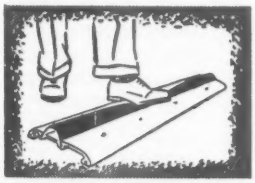


Does away with winter draughts—keeps out rain, snow, dust and insects.



Maintains a perfect seal even if door warps—eliminates need for makeshift weather stripping.



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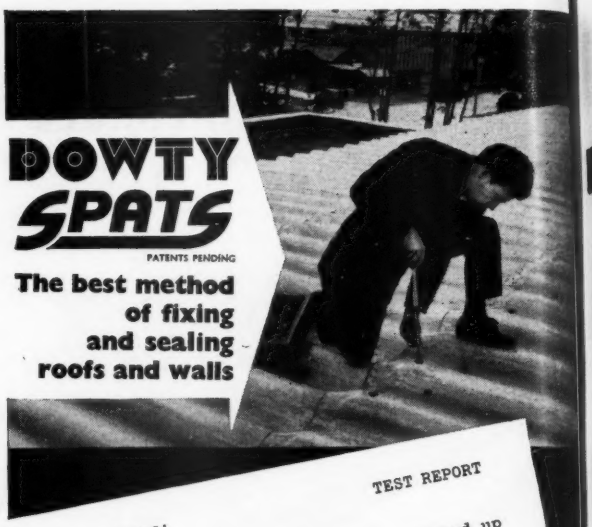

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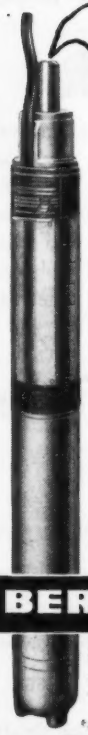

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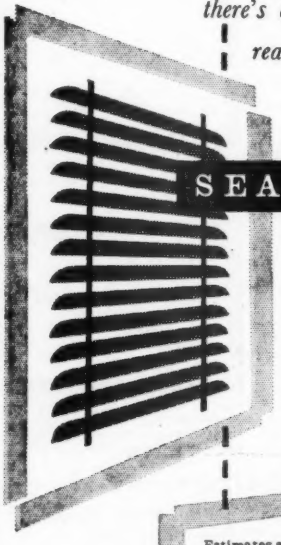

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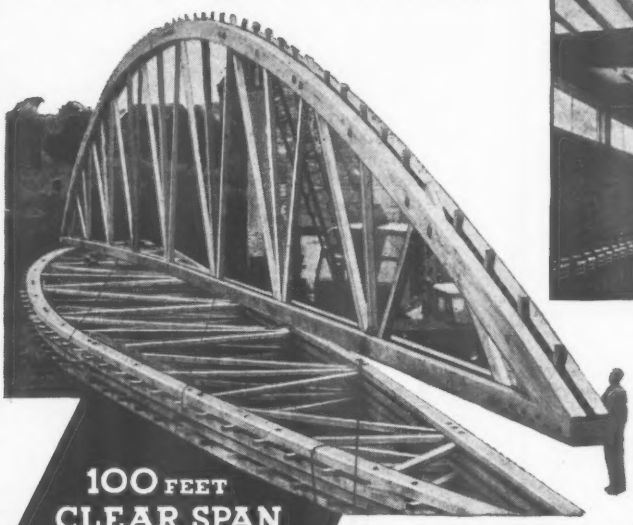

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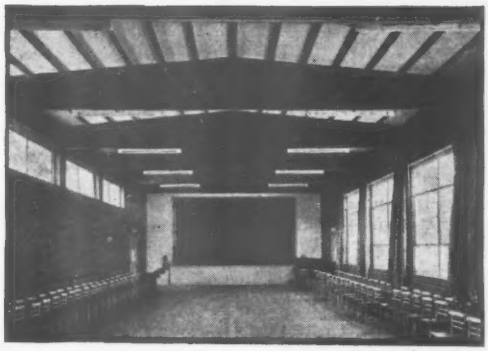

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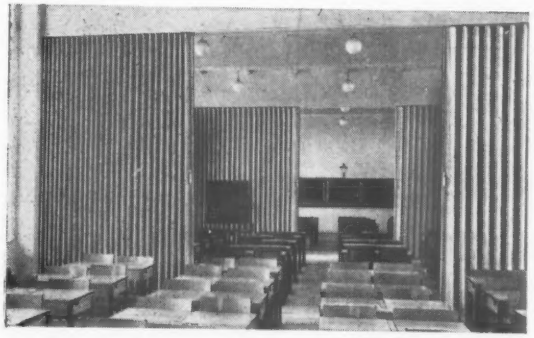

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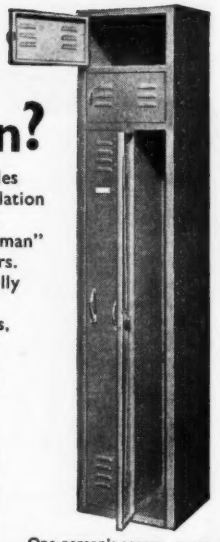
Phone: ABBEY 6732

Are *you* a 37½% man?



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BE WISE! CONSULT US BEFORE YOU PLAN LOCKER ROOMS BECAUSE . . .

. . . we offer the widest range of standard models. Including 3 point latching & streamlined SLIDEX handle. Also personally-tailored lockers designed and built for you.

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One person's accom., open, and showing **3 POINT LATCHING** 72" x 15" wide x 20" deep. Also other sizes.

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Address.....

.....

(A)

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DRAUGHT-PROOF VENTILATION

for kitchens, offices, hotels, restaurants

A guide to installation and ventilation requirements is given in Booklet V3901/A please write for copy.

Xpelair Sales, 59/62 High Holborn, London, W.C.1.
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I didn't know they made them!

As a matter of fact we don't, but our Associated Company, Economic Water Softeners Ltd., does. We suggest you contact Econa to get the same advice about service pipe layout as you do about single stack plumbing, even if a softener is out of the question for a little while. Your client **will** want soft water and Econa can help you.

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Photo by courtesy of London Airport.

At London Airport hundreds of people walk daily along passenger walk-ways fitted with TYPROD non-slip link mats. These mats have proved unsurpassable for safety, comfort and long life under heavy and constant use. TYPROD mats and matting are ideal for all public buildings, offices, factories, hotels, etc., both inside and out. Write to us now for full information.

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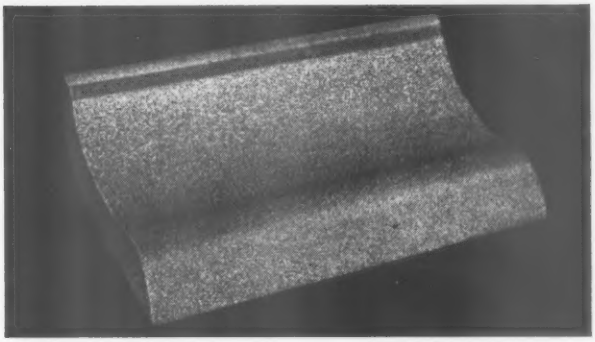
TYRE PRODUCTS LTD., 303, Harrow Road, Wembley. Middlesex. Telephone: Wembley 9555.



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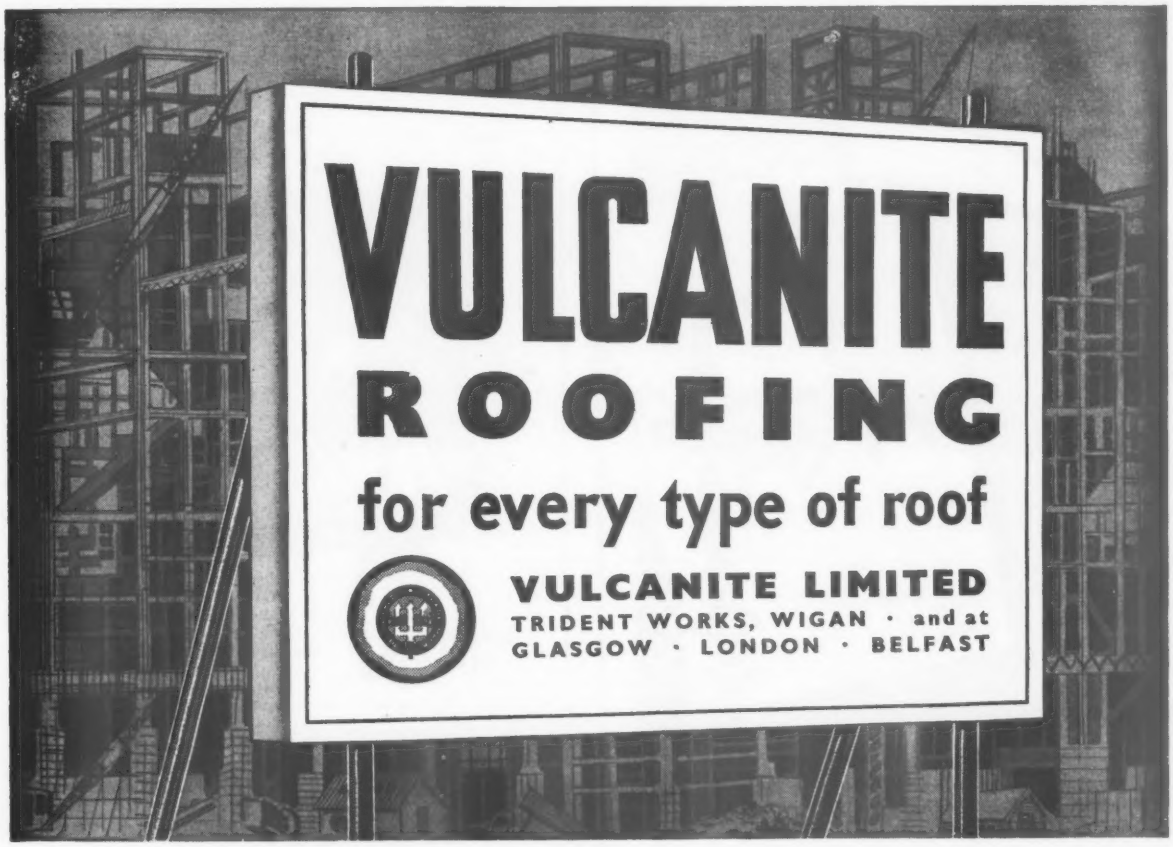

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Economical and easy-running sash-hanging for all new and existing sliding sashes, shopfronts, blackboards, and service hatches. From 5 lb. to 500 lb. held securely and safely for a lifetime.
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The Monoframe pulley has a one-piece rustproofed steel frame and face (with or without brass face-plate), and an independently rotating steel sleeve and brass wheel on a fixed G.M. axle. The sash chains are made of rustproofed Sheffield steel links assembled with P.B. rivets.
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The dependable system of sash-hanging since 1900 and STILL THE BEST IN THE WORLD

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HIGH JOINT STRENGTH FITTINGS
• IN NON-FERROUS METALS
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In Chrome, Block-Bronze, Polished & Lacquered Brass Finish.
COMPRESSION Fittings for Hospitals and Industrial Building.
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DONALD BROWN (Brownall) LTD.
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The ball-bearing slide-over action with counter-balance weights enables the door to be raised and lowered in an effortless manner. There are no complications when fixing.
The "Alborough" slide-over door is of hot-dipped galvanised steel laths steel welded and riveted construction and designed to give a pleasing appearance with maximum strength, lightness and durability. The range of standard sizes will meet most requirements, and by simple adjustment to door frames of garages of various widths and heights, all requirements can be met.
A.B.C.D. (Raynes Park), LTD., 34/35 Alpha Road, Surbiton, Surrey
Tel: Elmbridge 6591/2/3 and 9347

CLASSIFIED ADVERTISEMENTS

Advertisements should be addressed to the Advt. Manager, "The Architects' Journal," 9, 11 and 13, Queen Anne's Gate, Westminster, S.W.1, and should reach there by first post on Friday morning for inclusion in the following Thursday's paper.

Replies to Box Numbers should be addressed care of "The Architects' Journal," at the address given above.

AIR-MAIL SERVICE available on request:

In response to requests from a number of Overseas subscribers for air-mail delivery of Public and Official Appointment details and Other Appointments Vacant, we have been pleased to arrange that cuttings of all such classified advertisements appearing in the A.J., shall be despatched by air-mail on Wednesday of each week (one day prior to A.J. publication date). The cost of this special service to Overseas subscribers will be 5s. for four weeks (1s. 3d. for each additional week) and prepayment should be sent by subscribers wishing to take advantage of this service. The charge we are making represents only the actual cost of the postage involved.

Public and Official Announcements

3s. per inch; each additional line, 2s. 6d.

SOUTH WEST METROPOLITAN REGIONAL HOSPITAL BOARD

Applications are invited for the following appointments on the permanent staff of the Board's Regional Architect generally in accordance with Whitley Council conditions of service. London weighting allowances payable in all grades.

ASSISTANT ARCHITECT

Applicants must be Associate members of the Royal Institute of British Architects and capable of preparing working and detailed drawings and specifications and supervising work on individual projects. Experience of hospital planning and construction an advantage. The commencing salary will be within the scale £700 × £25 (3) × £30 (1) × £35 (6)—£1,015.

ASSISTANT QUANTITY SURVEYOR (*a*)
ASSISTANT LAND SURVEYOR (*b*)

Applicants for both posts must be Corporate members of the Royal Institute of Chartered Surveyors.

(*a*) (Quantity Surveying Section) with sound practical experience in working up and taking off of quantities for contracts, checking contractors' accounts, estimating and analysing prices.

(*b*) With sound practical experience of the Surveying of land and buildings and familiarity with matters relating to the Town and Country Planning and Building By-laws.

The commencing salary for both posts will be within the scale £700 × £25 (3) × £30 (1) × £35 (6)—£1,015 p.a.

ARCHITECTURAL ASSISTANT AND LAND SURVEYING ASSISTANT

Applicants must have passed the Intermediate Examination of the appropriate institution or an examination giving exemption therefrom. Salary £525 (at 21 or over) × £20 (4) × £25 (5)—£730 p.a. Commencing salary may be above the minimum but not more than £605 per annum.

Application forms may be obtained from the undersigned at 40, Eastbourne Terrace, W.2, and must be completed and returned by not later than 24th November.

E. G. BRAITHWAITE,
Secretary.

1902

CORBY DEVELOPMENT CORPORATION
ARCHITECTS

Applications are invited for the following appointments on the staff of the Chief Architect:

A SENIOR ASSISTANT ARCHITECT, salary within the Grade A.P.T. VII, £1,034—£1,273.

AN ASSISTANT ARCHITECT, salary within the grade A.P.T. V, £844—£1,029.

The commencing point within these scales will depend upon experience and qualifications.

The appointment will be subject to Superannuation under the Local Government Scheme.

The work of the Corporation offers wide experience in the design and construction of houses, Town Centre buildings and factories, both in large schemes and in individual buildings.

Housing is available and assistance with removal expenses will be provided.

Applications stating age, education, training, qualifications, experience, present and past appointments and salary, together with the names of two Referees must reach the undersigned by Tuesday, 18th November, 1958.

R. F. BROOKS GRUNDY,
General Manager.

Spencer House,
Corby, Northants. 1882

GOVERNMENT OF NORTHERN IRELAND
ASSISTANT ARCHITECT CLASS II

Applications are invited for pensionable posts in the Chief Architect's Branch, Ministry of Finance. Candidates must be Registered Architects by examination, with at least 2 years' experience in an Architect's Office in the preparation of working drawings. Salary scale £780 (at age 25)—£1,055 (age 34 and over)—£1,215. Transfer of existing Pension rights may, in certain circumstances, be approved. Preference will be given to ex-Servicemen. Application forms may be obtained from the Secretary, Civil Service Commission, Stormont, Belfast.

F33/2/25/10/57 1718

URBAN DISTRICT OF FELTHAM
ARCHITECTURAL ASSISTANT

Applications are invited for the appointment of an Architectural Assistant on the Council's unestablished staff at a salary within Grade A.P.T. III of the National Scales (£845—£1,025 per annum) plus London weighting. Applicants must be suitably qualified.

Forms of application, obtainable from the undersigned, must be returned accompanied by copies of two testimonials not later than 18th November, 1958. Canvassing directly or indirectly will disqualify and applicants must disclose, in writing, whether to their knowledge they are related to any member of or the holder of any senior office under the Council.

M. W. COUPE,
Clerk of the Council.

Council Offices,
Feltham, Middlesex. 1905

BOROUGH OF HARROW
APPOINTMENT OF ARCHITECTURAL ASSISTANT

Applications are invited for the appointment of Architectural Assistant, A.P.T. Grade II (£725 to £845 per annum, plus London weighting) in the department of the Borough Engineer and Surveyor. Candidates should have passed the Intermediate Examination of the Royal Institute of British Architects.

The appointment will be subject to the provisions of the Local Government Superannuation Acts and to the National Joint Council's Scheme of Conditions of Service.

The Council is unable to provide housing accommodation for the successful candidate. Canvassing will disqualify.

Forms of application, obtainable from me, should be returned not later than Saturday, 22nd November, 1958.

D. H. PRITCHARD,
Town Clerk.

Town Clerk's Office,
Harrow Weald Lodge,
Harrow,
Middx. 1924

COUNTY OF ESSEX
BOROUGH OF WALTHAMSTOW
COMMITTEE FOR EDUCATION

Applications are invited for the following appointments in the office of the Education Architect, Mr. T. L. Rampton, A.R.I.B.A., A.R.I.C.S.

(*a*) ASSISTANT ARCHITECT, A.P.T. Grade IV, between £1,025 and £1,175 per annum.

(*b*) ASSISTANT ARCHITECT, A.P.T. Grade II, £725 to £845 per annum.

London weighting of £30 (under 26 years of age £20) applicable to both appointments.

For appointment (*a*) applicants must be Associate Members of the R.I.B.A. Experience in design and construction of schools, and contract administration an advantage.

For appointment (*b*) applicants should have passed the Intermediate Examination R.I.B.A.

Forms of Application to be obtained from and returned to the Borough Education Officer, Education Department, Town Hall, Forest Road, E.17, within three weeks of the appearance of this notice. 1956

BOROUGH OF SCARBOROUGH
BOROUGH AND WATER ENGINEER'S DEPARTMENT
ARCHITECTURAL ASSISTANT

Applications are invited from appropriately qualified candidates for a post of Architectural Assistant. Salary, Special Scale, £750—£1,030 per annum.

The appointment is subject to the provisions of the Local Government Superannuation Act, 1937-1953, and to the passing of a medical examination, and will be terminable by one month's notice on either side. The Council may assist in the provision of housing accommodation.

Applications, in envelopes endorsed "Architectural Assistant," stating age, present and previous appointments, training, qualifications and experience, together with the names of two referees, must be delivered to the undersigned not later than the 22nd November, 1958.

H. V. OVERFIELD,
Borough and Water Engineer.

Town Hall,
Scarborough.
November, 1958. 1961

ANGLESEY COUNTY COUNCIL
COUNTY PLANNING DEPARTMENT

Applications are invited for the post of PLANNING ASSISTANT, Grade A.P.T. I/II (£575—£845).

Applicants should have had a sound training in a planning office, be competent draughtsmen, and capable of undertaking survey work. Preference will be given to applicants who have passed the Intermediate Examination of the Town Planning Institute. The commencing salary will depend upon qualifications and experience.

Applications, giving names and addresses of two referees to the Clerk of the County Council, Shire Hall, Llangefni, by not later than Monday, the 24th November, 1958. 1953

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT

Vacancies for ARCHITECTURAL ASSISTANTS, starting salary up to £860. Full and interesting programmes of houses, flats, schools and general buildings.

Application form and particulars from Hubert Bennett, F.R.I.B.A., Architect to Council (EK/52/58), County Hall, S.E.1. (2168.) 1949

EBBW VALE URBAN DISTRICT COUNCIL
PROPOSED CIVIC CENTRE

Applications are invited for the undermentioned appointments on the Temporary Staff of the Architect's Department.

(*a*) ASSISTANT ARCHITECT—Grade A.P.T. III (£845—£1,025).

(*b*) ARCHITECTURAL ASSISTANT—Grade A.P.T. II (£725—£845).

Applicants for appointment (*a*) should be A.R.I.B.A. and for appointment (*b*) should have passed Intermediate Examination, R.I.B.A.

The appointments are to be made in connection with the preparation of a scheme for a proposed New Civic Centre.

The appointments will be subject to provisions of Local Government Superannuation Acts, and National Conditions of Service. The successful applicants will be required to pass a medical examination and the appointments will be subject to one month's notice, in writing, on either side.

Applications, stating age, qualifications and experience, together with names of two referees, should be sent to the undersigned not later than Saturday, 22nd November, 1958.

Applicants must state in their applications whether, to their knowledge, they are related to any Member of the Council or Senior Officer under the Council.

Canvassing disqualifies.

HOWARD J. WILLIAMS,
Clerk of the Council.

Council Offices,
The Walk,
Ebbw Vale, Mon. 1955

CITY OF BRADFORD
ARCHITECTURAL ASSISTANTS

Applications are invited for the following superannuable appointments in the City Engineer and Surveyor's Department.

(*a*) Architectural Assistants, Posts 33 and 122, Special Grade (£750—£1,030), commencing salary in accordance with experience and qualifications.

(*b*) Architectural Assistants, Post 123, Grade A.P.T. I (£575—£725), and Post 124, Grade A.P.T. II (£725—£845).

(*c*) TRACING ASSISTANT, Post 80 (Higher General Division) (£230—£560).

(*d*) DRAUGHTSMAN, Post 59, Grade A.P.T. I (£575—£725).

Candidates for Posts (*a*) should have had experience in the design of houses, flats and shops and the layout of housing estates, have sound design ability and be experienced in the preparation of working and detail drawings.

Applicants for Post (*b*) should have had experience in architectural design. Candidates should have passed the Intermediate examination of the appropriate professional body.

Candidates for (*c*) should have had experience in tracing engineering drawings, must be neat draughtsmen and have passed G.C.E. in English, Mathematics and two other subjects or equivalent.

Applicants for (*d*) should be suitably qualified and have experience of maps and plans to ordnance survey scales preferably engineering or architectural experience.

All applicants should have completed their National Service. No housing accommodation can be provided by the Corporation.

Applications on form to be obtained from the City Engineer and Surveyor, Town Hall, Bradford, 1, together with three testimonials, must reach me by 28th November, 1958.

W. H. LEATHEM,
Town Clerk.

Town Hall,
Bradford, 1. 1968

LONDON COUNTY COUNCIL
ARCHITECT'S DEPARTMENT

Vacancies for (1).—ARCHITECT/PLANNERS. Tasks include three-dimensional planning within London's eight major comprehensive development areas (including Stepney/Poplar, the South Bank and Elephant and Castle) and other redevelopment areas. Work includes preparation of comprehensive lay-outs for all important areas of new development throughout County, including areas to be redeveloped in connection with road improvements.

(2).—TOWN PLANNING ASSISTANTS. Duties include investigation of development proposals, surveys, report writing, preparation of data for Public Inquiries.

Starting salaries in each case up to £860 according to experience and qualifications. Application forms and particulars from Hubert Bennett, F.R.I.B.A., Architect to Council (EK/51/58), County Hall, London, S.E.1. (2167.) 1950

BOROUGH OF TOTTENHAM

Applications are invited for the following posts:—

ASSISTANT ARCHITECT (Unestab.), A.P.T. Special Grade—£750 to £1,030 p.a. Applicants must hold a Final professional qualification.

ARCHITECTURAL ASSISTANT (Estab.), A.P.T. II—£725 to £845 p.a. Applicants must have at least passed R.I.B.A. Intermediate examination or equivalent.

ARCHITECTURAL ASSISTANT (Estab.), A.P.T. I—£575 to £725 p.a. Applicants must have passed R.I.B.A. Intermediate examination or equivalent.

London weighting allowance of £20 or £30 p.a. according to age.

Commencing salaries within grades according to ability and experience.

Application form and Conditions of Appointment from Borough Engineer (AJ), Town Hall, N.15. Applications to be delivered by Thursday, 27th November, 1958. 1993

CITY OF BRADFORD
TOWN PLANNING ASSISTANTS

Applications are invited for the following superannuable appointments in the City Engineer and Surveyor's Department.

(*a*) SENIOR TOWN PLANNING ASSISTANT, Post 8. Grade A.P.T. IV (£1,025—£1,175).

(*b*) TOWN PLANNING ASSISTANT, Post 14. Special Grade (£750—£1,030).

Candidates for (*a*) should have experience in dealing with applications for development for new housing, industrial and commercial buildings and advertisement control, and experience in the preparation of Development Plans.

The successful candidate for (*b*) will be required in connection with the layout of large Corporation Housing Estates and schemes of development as the result of slum clearance.

Applicants should be either A.M.T.P.I., A.R.I.B.A., A.M.I.Mun.E., or A.M.I.C.E.

All applicants should have completed their National Service. No housing accommodation can be provided by the Corporation.

Applications on form to be obtained from the City Engineer and Surveyor, Town Hall, Bradford, 1, together with three testimonials, must reach me by 28th November, 1958.

W. H. LEATHEM,
Town Clerk.

Town Hall,
Bradford, 1. 1967

BOROUGH OF PORTADOWN
APPOINTMENT OF ARCHITECT AND PLANNING OFFICER

The Portadown Borough Council require the services, in a permanent full-time capacity, of a Borough Architect and Town Planning Officer. Further Housing, Slum Clearance and Redevelopment, and provision of a Public Swimming Pool are amongst the Schemes presently envisaged by the Council.

The salary payable for the position is £1,250 × £40—£1,450, the commencing point on this scale to be fixed in relation to the qualifications and experience of the successful candidate. A car mileage allowance will be payable. The person appointed will be on probation for 12 months.

The appointment will be subject to the approval of the Ministry of Health and Local Government, and is governed by the provisions of the Local Government (Superannuation) Act (Northern Ireland), 1950.

The person appointed must be a Fellow or Associate of the Royal Institute of British Architects, a Member or Associate Member of the Town Planning Institute, and also have at least two years' practical experience. He must also comply with the other requirements of the Local Authorities (Qualification of Architects) Regulations (Northern Ireland) 1946 (S.R. & O. 1946, No. 79) and the Local Authorities (Qualifications of Planning Officers) Regulations (Northern Ireland) 1948 (S.R. & O. 1948, No. 146). Preference will be given to Ex-Service applicants possessing the required qualifications provided that the Council is satisfied that such applicants can, or within a reasonable time will be able to, fill the vacant post efficiently.

Copy of Terms and Conditions of Appointment may be had from the undersigned, by whom applications stating qualifications, age, experience and particulars of past and present appointments, and accompanied by copies of two recent testimonials, will be received up to 12 noon on Saturday, 29th November, 1958.

The Council will assist in finding housing accommodation for the successful applicant.

GEORGE McGOWAN,
Town Clerk.

Town Hall,
Portadown,
N. Ireland.
October, 1958. 1944

DERBYSHIRE COUNTY COUNCIL
COUNTY ARCHITECT'S DEPARTMENT

Vacancies exist for fully qualified ARCHITECTS. Salaries on the scale £750 to £1,030 per annum. National Joint Council Conditions of Service. Pensionable posts. Canvassing disqualifies. Application forms from the County Architect, County Offices, Matlock. 1952

BERWICKSHIRE COUNTY COUNCIL
ARCHITECTURAL ASSISTANT

required for County Architect's Department. Salary scale A. & P. VI to VII (£880 to £1,085). Placing may be given. Candidates must be registered architects and preferably members of the Royal Institute of British Architects. The post is superannuable. House may be available. Application, stating age, qualifications and experience, and quoting two referees, to be lodged with the County Clerk, County Buildings, Duns, not later than 12th December, 1958. 1978

YORKSHIRE SOUTH RIDING COUNTY COUNCIL
COUNTY PLANNING DEPARTMENT

Applications are invited for established post of PLANNING ASSISTANT (Development Control), A.P.T. Grade III. Applicants must possess both planning and architectural experience and be members of the Town Planning Institute or of the Royal Institute of British Architects. This is a new appointment to handle applications for imaginary planning permissions for purposes of assessing market value under the 1958 Town and Country Planning Bill. The officer appointed will be solely concerned with a full and varied programme of imaginary work in hypothetical circumstances. A vivid imagination will be a decided asset. Applications, stating age, details of any previous imaginary experience and imaginary salary required. Box 1997.

COUNTY BOROUGH OF SWANSEA
EDUCATION COMMITTEE
SWANSEA TECHNICAL COLLEGE
APPOINTMENT OF LECTURER IN ARCHITECTURE

Wanted, for 1st January, 1959, or as soon thereafter as possible, a full-time Lecturer in Architecture, for the Department of Building and Architecture. Candidates must possess a degree in Architecture, or a diploma of a recognised School of Architecture; possess professional membership of the Royal Institute of British Architects, and have had professional experience.

The College provides part-time courses conducted, principally, for articled pupils and leading to the Intermediate examination of the R.I.B.A.

Salary—Burnham (Further Education) Report, 1956, Scale for Lecturers, *viz.*: £1,200 per annum × £30—£1,350 per annum.

Application forms, obtainable from the undersigned on receipt of a stamped addressed envelope, to be completed and returned not later than 28th November, 1958.

L. J. DREW,
Director of Education.

Education Department,
Guildhall,
Swansea.
October, 1958. 1945

ASSISTANT ARCHITECTS required in Office of Architect, Waterloo Station. Applicants should have had experience in design and detailing of varied types of buildings and have a keen interest in modern building techniques. Membership of the R.I.B.A. not essential, but preference will be given to applicants preparing to sit for the R.I.B.A. Final Examination. Salary on scale £833—£903 per annum. Free and other travel facilities. Superannuation Fund. Five-day week. Apply, giving details of experience and qualifications, to Chief Civil Engineer, British Railways (Southern Region), Waterloo Station, S.E.1. 1980

NATIONAL COAL BOARD—
EAST MIDLANDS DIVISION

ARCHITECT GRADE II (Salary scale £815 × £30 — £1,125) required for Divisional Architects' Department in Nottingham. Candidates should be corporate members of the R.I.B.A. with varied practical experience.

The architectural work of the department covers the design of colliery surface buildings of all types, including workshops, stores, power plants, offices, pithead baths, canteens, medical centre and recreation buildings.

The point of entry into the salary scale will depend on qualifications and experience. The post is superannuable and superannuation rights under Local Authority and certain other schemes are transferable.

Applications giving age, present salary and full details of qualifications, experience and present appointment should be addressed to: The Divisional Chief Staff Officer, National Coal Board, East Midlands Division, Sherwood Lodge, Nr. Arnold, Nottingham. Please quote reference S.V.912 (R). 2001

CITY OF SALFORD
CITY ENGINEER & SURVEYOR'S DEPARTMENT

Applications are invited for the following new posts:—

(*a*) TWO ASSISTANT ARCHITECTS, at salaries within the Special Grade, £750—£1,050 per annum.

Applicants should hold at least Parts I and II of the R.I.B.A. Final or equivalent and have five years' experience.

(*b*) TWO ARCHITECTURAL ASSISTANTS, at salaries within A.P.T. Grades I/II, £575—£845 per annum.

Applicants must have passed the R.I.B.A. Intermediate examination or equivalent and have some drawing office experience. Facilities for completion of professional training will be given to holders of these posts.

The work of the Department affords experience in a wide variety of municipal engineering and architectural projects carried out for all Committees of the Council.

Housing accommodation will be provided in approved cases.

The appointments will be subject to the provisions of the Local Government Superannuation Acts, the National Scheme of Conditions of Service, and the passing of medical examinations.

Applications, stating age, qualifications and details of experience, together with the names of two referees, should be sent to the City Engineer & Surveyor, Town Hall, Salford, 3, Lancs., to arrive not later than Monday, 1st December, 1958.

R. RIBBLESDALE THORNTON,
Town Clerk.
1982

COUNTY BOROUGH OF EASTBOURNE
ASSISTANT ARCHITECTS
SPECIAL GRADE: £750/40/£1,030

Applications are invited for the above appointments; commencing salary according to qualifications and experience.

Full particulars of age, present and previous positions, qualifications and experience, together with the names of two referees, to be sent to the undersigned by 28th November, 1958.

R. WILLIAMS.
Borough Surveyor.

2/4 Saffrons Road,
Eastbourne,
Sussex.
6th November, 1958. 1990

CITY OF NORWICH
CITY ARCHITECT'S DEPARTMENT

ARCHITECTURAL ASSISTANT required on permanent staff, salary grade A.P.T. I (£575 × £30 to £725).

Application forms, obtainable from the City Architect, City Hall, Norwich, must be returned by 5 p.m., November 25th. 2000

COUNTY BOROUGH OF IPSWICH
APPOINTMENT OF ARCHITECTURAL ASSISTANT—SPECIAL GRADE

Applications are invited for the superannuable appointment of Architectural Assistant in the Borough Engineer & Surveyor's Office. The salary will be in accordance with the Special Grade, *i.e.*, £750—£1,030 p.a., and the commencing salary will be fixed according to qualifications and experience.

Applicants must have passed the final examination of the Royal Institute of British Architects and have had good experience in general architectural work, preferably with a Local Authority.

Applications stating age, experience and other relevant details, together with the names of two referees, must reach the Borough Engineer & Surveyor, 19 Tower Street, Ipswich, not later than Wednesday, 26th November, 1958. Canvassing will disqualify.

J. C. NELSON,
Town Clerk.

Town Hall,
Ipswich. 2002

COUNTY BOROUGH OF WEST HAM
BOROUGH ARCHITECT AND PLANNING OFFICER'S DEPARTMENT

Applications invited from suitably qualified and experienced architects for the post of: CHIEF ASSISTANT ARCHITECT (N.J.C. Scale "A"—£1,185 × £50 (3) × £45 (1)—£1,380 p.a.). Commencing salary within Scale according to experience and qualifications.

The County Borough has an extensive reconstruction and slum clearance programme, and offers varied and interesting work.

Application forms and details from Borough Architect & Planning Officer, Thomas E. North, O.B.E., F.R.I.B.A., Dist.T.P., M.T.P.I., 70, West Ham Lane, E.15 (returnable by 2nd December, 1958). 1986

Architectural Appointments Vacant

4 lines or under, 9s. 6d.; each additional line, 2s. 6d. Box Number, including forwarding replies, 2s. extra

FIRST CLASS SENIOR ASSISTANT required. Must have good office experience in London. Very interesting work. Five-day week. Morris de Metz, F.R.I.B.A., 2, Ludgate Hill, London, E.C.4. Telephone CITy 4086. 1685

ARCHITECTURAL ASSISTANT required in the Chief Architect's office of a large Multiple retail firm with offices in London. Five-day week, pension scheme, dining room. Applicants should state age, qualifications, experience and salary required. Box 1767.

ARCHITECTURAL ASSISTANTS required for large schemes of contemporary character. Excellent opportunities to suitable applicants. Five-day week. Please write giving full particulars of experience and salary required to Johns, Slater & Haward, F./A.R.I.B.A., 22, Foundation Street, Ipswich. 1817

ARCHITECT requires part-time or temporary help from experienced Assistant/Associate in London area. Speed, accuracy and good draughtsmanship essential. Must be able to carry out surveys unsupervised. Box 1921.

ASSISTANT ARCHITECT required for varied work, should be qualified or near Final standard. Pension scheme available. Write with details training and salary required. T. E. Johnson & Son, FF./R.I.B.A., 20, Priory Place, Doncaster. 1894

CHIEF ARCHITECTURAL ASSISTANT with experience and initiative urgently required to take charge of small Drawing Office. Varied practice. Salary £1,080—£1,200. Apply, giving full particulars of qualifications, experience, training, to Box 1923, or telephone Shoreditch 3383 for appointment.

ASSISTANT required in busy West End practice, about 25 years of age and R.I.B.A. Intermediate standard. Good opportunities for taking responsibility. Please write giving details of experience, and salary required. Box 1868.

RONALD WARD & PARTNERS require ARCHITECTURAL ASSISTANTS with contemporary outlook, and willing to use own initiative. Salary range £600 to £900. Congenial working conditions. Five-day week. Apply 29, Chesham Place, Belgrave Square, S.W.1. Telephone Belgravia 3361. 1839

ARCHITECTURAL ASSISTANT of Intermediate R.I.B.A. standard required in Reading Office. Applicants must be good draughtsmen, able to make surveys, produce working drawings and details. Must be used to working in a provincial office. Apply in writing, stating experience and salary required to Box 1869.

ARCHITECT'S ASSISTANT required for the London Office of a firm of Architects with interests throughout the country; must be of Intermediate R.I.B.A. or R.I.C.S. standard. Superannuation scheme. Apply to: Cotton, Ballard & Blow, 5, Baker Street, London, W.1. WELbeck 3364. 1903

ARCHITECTURAL ASSISTANT at about Intermediate standard required for private practice. Good salary according to ability. Write for full particulars to Thompson & Chipperfield, 1, Woburn Street, Ampthill, Bedford. 1909

QUALIFIED Architect, aged about 30, required as CHIEF ASSISTANT for Country Practice. Reply, giving age, details of experience and salary required to Box 1933.

INTERMEDIATE ASSISTANT with office experience required London Office, varied work. Preference given to applicants actively studying for Final. Study time allowed by arrangement. Box 1825.

ARCHITECTURAL ASSISTANTS required with office experience for varied and interesting work. Pension scheme available. Write stating experience and salary required to Ernest J. Thomas, Jolly & Grant, 26 Kent Road, Southsea, Hants. 1804

QUALIFIED or Final standard ARCHITECTURAL ASSISTANT with at least two years' office experience. Must be a good draughtsman, orderly minded and with practical knowledge of detailing and general office routine. Applicant will be responsible for supervising small drawing office as well as some outside site supervision. Excellent opportunity for applicant seeking responsibility. Five-day week, luncheon vouchers. Apply in hand-writing, giving full particulars of experience and salary required, to Felix Walter, F.R.I.B.A., 4, Raymond Buildings, Gray's Inn, London, W.C.1. 1919

ASSISTANT required. Intermediate standard. Congenial work and real experience. Ivor Warner, 57, Shelton Street, Covent Garden, W.C.2. Covent Garden 1377. 1885

LANCHESTER & LODGE urgently require ARCHITECTURAL ASSISTANTS within the £650/£800 salary range. Varied and interesting work. Five-day week and luncheon vouchers. Write full particulars, 10, Woburn Square, W.C.1. 1884

GOLLINS, MELVIN, WARD & PARTNERS have vacancies for JUNIOR and INTERMEDIATE STAFF. Five-day week, quarterly bonuses, pension scheme. Telephone WEL. 9991 for appointment. 1896

GOLLINS, MELVIN, WARD & PARTNERS have vacancies for school trained ASSISTANTS interested in the design of University and Hospital buildings. Five-day week, quarterly bonuses, pension scheme. Tel. WEL. 9991 for appointment. 1895

ARCHITECTURAL ASSISTANT, Intermediate A.R.I.B.A., required by a large Birmingham firm for work on interesting contemporary multi-store projects in Birmingham. Preferably capable of working with minimum supervision. Five-day week. Telephone Edgbaston 4571, or write J. Seymour Harris & Partners, 3-4, Greenfield Crescent, Five Ways, Birmingham, 15. 1876

A COMPETENT ASSISTANT, with several years' experience and capable of working with little supervision, required in Branch Office, Birmingham, engaged on a varied and interesting programme of commercial projects. Applications, giving full particulars and salary required, to: G. S. Hay, A.R.I.B.A., Chief Architect, Co-operative Wholesale Society, Ltd., 1, Balloon Street, Manchester, 4. 1874

SENIOR ASSISTANT, A.R.I.B.A. or equivalent, with experience of domestic design; used to both office and site work and supervision; required by Architect engaged on housing and shops for a London Property Company. Work will be in London and Pinner. Salary £900 to £1,000, according to qualifications. Pension scheme. Box 1878.

SENIOR ASSISTANT ARCHITECT required for busy office in large South-Coast town. The post calls for a man in the 30/40 age group, having ability and experience necessary to take charge of a fair size drawing office and to deputize for the local Partner. Previous experience in schools and commercial work essential. Excellent prospects exist for the right man. Applications giving fullest possible particulars to Box 1964.

MAJOR Petroleum Distribution Company requires for its Leeds Office an ARCHITECTURAL ASSISTANT for work on service stations and varied commercial projects. Applicants must be of Intermediate R.I.B.A. standard with sound knowledge of construction and have had a minimum of five years' private office experience. Apply in writing giving full details of age, qualifications and experience to Box 1966. Replies can only be sent to those selected for interview.

WANTED. TWO ASSISTANT ARCHITECTS for West End Office with 12 other Assistants. One Senior, one Junior, minimum Intermediate R.I.B.A., salary £600 upwards. Experience in Interior Design and Decor an advantage. Apply with full particulars to Box 1963, stating salary required.

RALPH TUBBS, 46, Queen Anne Street, W.1, requires qualified ASSISTANT ARCHITECT with both imagination and experience. Please apply by letter with brief particulars. 1965

LOUIS DE SOISSONS, PEACOCK, HODGES & ROBERTSON have a vacancy for a JUNIOR and SENIOR ASSISTANT. Write stating age, salary and experience to the above at 3, Park Square Mews, Upper Harley Street, N.W.1. 1948

SENIOR and JUNIOR ASSISTANTS required for busy office in the North East. Ability and a sense of responsibility are the essential qualities. Good starting salaries are offered and progress will depend on performance. Pension Scheme and Bonus Scheme are both operated. Box 1962.

ASSISTANT ARCHITECT with 3-5 years' experience required in small office in North Herts. Five-day week. Please write giving full particulars of experience, age and salary required to Box 1971.

TWO ARCHITECTURAL ASSISTANTS required immediately, important Laboratory, Museum and Hospital buildings in London. Previous office experience essential. Intermediate and near final standard. Salary to be agreed. Five-day week, luncheon vouchers. Apply in writing to Young & Hall, 9, Southampton Row, W.C.1. 1970

ARCHITECTURAL ASSISTANT, Intermediate to Final standard, required for varied and interesting work, mostly on commercial and industrial projects. Apply in writing, stating age, experience and salary required. H. Marcus Brown & Lewis, 45, Queen Street, Wolverhampton. 1992

ARCHITECTURAL ASSISTANT required for a progressive practice. Intermediate to Final standard. Interesting work including industrial, commercial and domestic schemes covering the West Country. Contemporary outlook essential. Kindly write, giving full details of qualifications, training, experience, etc., to Edward Narracott & Partner, F/A.R.I.B.A., 48, Torwood Street, Torquay. 1994

ARCHITECTURAL ASSISTANTS required in Architect's Office of a large Multiple Retail Firm—Head Office, Leicester. Intermediate standard and Final standard. Five-day week. Pension Scheme available. Write, giving full particulars of experience and salary required, to Box 1985.

EXPERIENCED ARCHITECTURAL ASSISTANT required with good knowledge of office administration and working drawings. Minimum standard, Intermediate R.I.B.A. Varied work in connection with company expansion. Some travelling involved with prospects of early promotion for suitable man. Canteen, social club, pension scheme. Write, giving concise details of age, experience, education, qualification, salary required, to: Personnel Manager, Schweppes, Limited, 1/6, Connaught Place, London, W.2. 1988

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VIC HALLAM LIMITED require ARCHITECTS of Intermediate and qualified standard for varied architectural work in the field of timber prefabrication. Previous experience desirable although not essential. Congenial working conditions. Good salary by arrangement. Superannuation Scheme. Apply in writing stating age, qualifications, experience and salary required to the Company Architect, Vic Hallam Limited, Valley Works, Langley Mill, Nr. Nottingham. 1941

DONALD ROWSWELL requires capable Intermediate ASSISTANT, with minimum seven years' office experience, for small expanding practice in Croydon. Apply stating salary required, to 5A Friends Road, Croydon, or telephone CROydon 4080. 1960

ARCHITECTURAL ASSISTANT (near Final or recently qualified standard) required in small West End Office of Chartered Architect, dealing with the design of chain shops. Must be interested in contemporary design. Salary £700—£750. Apply Box 1959.

ARCHITECTURAL ASSISTANT, small West End Office, good prospects, must be experienced to at least Intermediate standard. Commencing salary £700—£750 per annum, according to experience. Apply Box 1979.

ASSISTANT required at once by Architect in South Kensington for varied and interesting work. Applicant should have passed Intermediate and be preparing for Finals; good draughtsman with 2/3 years' practical experience. Write Box 1943, or ring KENsington 1242.

ARCHITECTURAL ASSISTANT wanted for expanding and progressive practice. Junior position. Prospects promotion. Two to three years' experience essential. John Radford, A.R.I.B.A., 14, Southernhay West, Exeter. Telephone 72910. 1939

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CONTEMPORARY office requires enthusiastic ASSISTANTS willing to accept responsibility. Several vacancies are open and applications are welcomed from both qualified and student members. The office is in pleasant out of town surroundings and works a five-day week. Salaries by arrangement. Apply with details to Morrison and Partners, St. Alkmunds House, 103 Belper Road, Derby. 2005

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ARCHITECTS in Loughton, Essex, require intermediate standard ASSISTANT, capable of preparing working drawings and managing contracts. Box 2003.

ASSISTANTS required for Commercial and Industrial work, excellent working conditions, lunch facilities, salary around £1,000. Apply in writing to Alan A. Briggs, F.R.I.B.A., 10, Fleet Street, London, E.C.4. 1957

Architectural Appointments Wanted

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ASSOCIATE, 30, 8 years' varied experience, seeks employment with a future preferably outside 50 mile radius London. Car owner. Please reply to Box 1947.

YOUNG LADY. Good general education. Finished course in Interior Design and Decoration. Seeks interesting post with Architecture firm. Box 1958.

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ARCHITECT (specialist in Super-Markets), recently returned from Canada, looks for position where his experience could be usefully applied. Box 1996.

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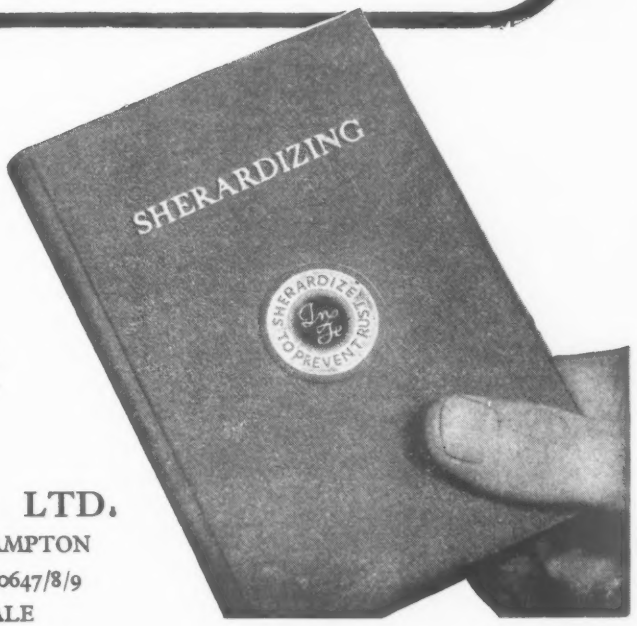

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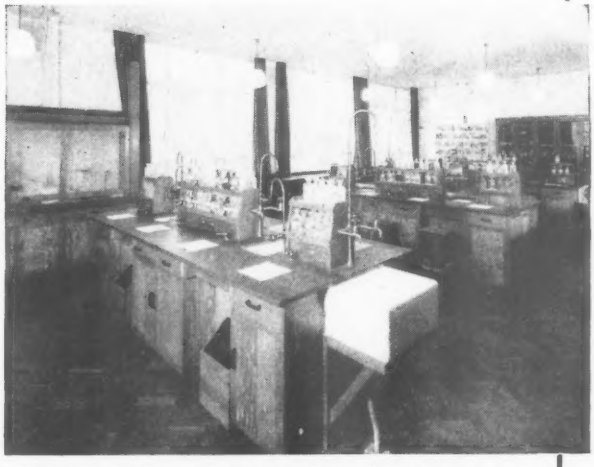

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